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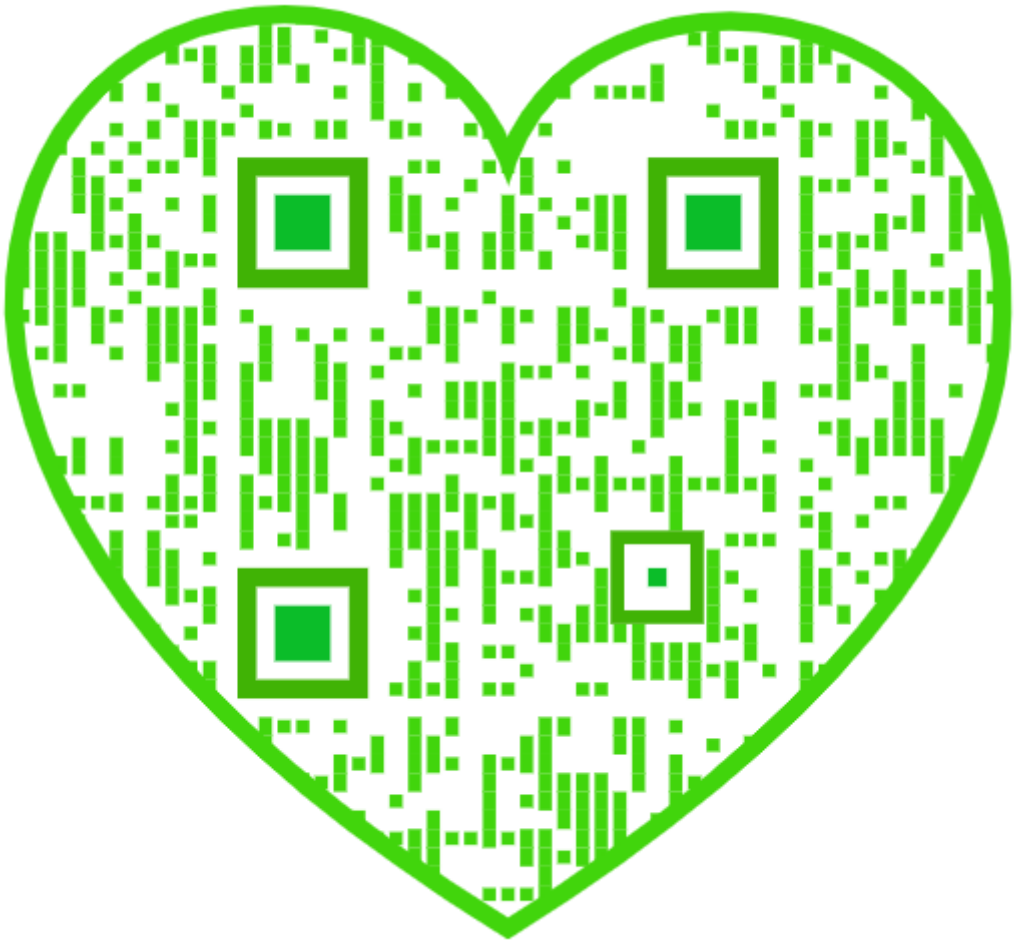

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The British
Bee Journal.

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OUR THIRTY-FOURTH VOLUME.

The unfamiliar heading of this week's issue will be seen by a good many readers for the first time. Appearing, as it does, only once each year, it marks the opening of a new volume of the BRITISH BEE JOURNAL, the beginning of another year's voyage on what has been called "the uncertain sea of bee literature."

Many bee-papers have come and gone since the B.B.J. set out on its maiden trip in 1873, yet we are "still running," and to-day begin our thirty-fourth annual journey full of hope, and happy in retaining the goodwill and confidence of a large army of bee-keepers. The first Editor and founder of the JOURNAL (our dear friend the late C. N. Abbott) was of a breezy nature, fond of nautical phrases, and very proud of "the crew that manned his little craft." As an insignificant member of that crew we shall never forget the trepidation with which we sent in our first "copy," with an apologetic postscript suggesting the "boiling-down" process or the "W.P.B." However, a brief reply came by next post to say, "All right, my boy; not a word 'cut,' can't have too much of a good thing."

Since that time wonderful progress has been made in bee-keeping. We do not hear nowadays of a glass super of honey, weighing 87 lb., being staged at a show and promptly bought for £10 by one of the judges (the Rev. W. Cotton), who gave it first prize. This happened at the Manchester Show of 1873.

Amid all the changes made since those days we still hold our first Editor's views, and say we are proud of our able staff of contributors, all voluntary workers in the cause, to whom we take this opportunity of expressing our gratitude for their valuable aid in making the B.B.J. instructive and interesting. We also add a cordial word of thanks to all for their good wishes for the future, and heartily reciprocate the same by wishing all bee-keepers a Happy and Prosperous New Year.

THE B.B.J. AND NEWSAGENTS.

In a letter (with renewal of subscription) just to hand, a rev. correspondent says:—"While writing I may say that I cannot get my BEE JOURNAL until mid-day on Friday. As I am close to Birmingham, it seems to me that I ought to get it at latest on Thursday night. We get the London daily papers in time for breakfast. Can you do anything in the matter? It militates against the success of any paper if it cannot be obtained until two days after publication. My newsvendor is Sherrington, Bearwood Road, Smethwick; his agent is, I believe, Mapstone, Birmingham. I have several times answered advertisements in your papers, and been too late."

We need hardly assure the writer of the above that it is a matter of regret to ourselves when any unnecessary delay occurs in obtaining our JOURNAL. But the late delivery is not ours. Anyone ordering his B.B.J. at Messrs. Smith and Son's bookstalls or shops can have it delivered along with the London morning papers, say by the early afternoon of publishing day (Thursday). We fear the delay in this case is owing to the number of hands it passes through before reaching his local agent at Smethwick.

BEE JOURNALS AND RAILWAY BOOKSTALLS.

Our readers are reminded that on and after January 1, 1906, the bookstalls on the stations of the London and North-Western Railway, the Great Western Railway, the North London Railway, and some small subsidiary lines, will pass from the control of Messrs. W. H. Smith and Son. Readers of the BRITISH BEE JOURNAL and of the *Bee-keepers' Record*, who have hitherto ordered or purchased their copies from these bookstalls, are respectfully asked to note the change, and to make early arrangements to secure a continuation of their supply. In the event of any difficulty arising they are requested to communicate with the Manager, BRITISH BEE JOURNAL, 8, Henrietta Street, Covent Garden, W.C.

DEATH OF THE REV. DR. BARTRUM.

With very deep regret we have to announce the sad news of the death of the Rev. Dr. Bartrum, who, as we just learn, passed peacefully away on the afternoon of Friday last, December 29, at his residence, Wakes Colne Rectory, Wakes Colne, Essex. The name of Dr. Bartrum will be less familiar to readers of to-day than to bee-keepers of the older school, who well remember his long and earnest labour on the Council of the B.B.K.A. more than a decade since.

The news reached us too late for an extended notice this week, but we hope to give fuller particulars of the deceased gentleman's work connected with bee-keeping in our next issue. In the meantime, it is safe to say that all readers will join us in tendering our heartfelt sympathy to Mrs. Bartrum and family in their sad bereavement.

Correspondence.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

*** In order to facilitate reference, Correspondents, when speaking of any letter or query previously inserted, will oblige by mentioning the number of the letter as well as the page on which it appears.*

NOTES BY THE WAY.

[6155.] A new volume of the B.B.J. starts to-day. "The New Year, blythe and bold, my friends, comes up to take his own," and I tender my best wishes to all our readers that it may prove a prosperous year to our craft. To deserve success should be our aim, though one has to admit that the best laid plans often fail to realise to our material benefit; yet the fact that we "did our best" yields some consolation even if it does not bring in the dollars. And so with the new year, we renew our resolutions to break all previous records; nor should we forget the help we can disseminate to our brethren in bee-keeping by mutual exchange of views on different subjects connected with our growing industry in the pages of our doughty friend the BRITISH BEE JOURNAL.

Railway Rates.—Since writing my last "Notes," a fortnight ago, I have received 3s. for the sale of the 10s. worth of damaged sections from G.W. Railway, and a note saying as the honey was sent at "owner's risk" the company does not admit my claim. Perhaps I ought not to grumble as this is my first breakage to this particular customer for some fifteen years, and it may interest our readers to know that during all those years every consignment has been sent per goods train. In fact, I have during the past twenty-five years always made it a custom to send all parcels of honey (my output is principally in sections) by goods train, except small parcels of one dozen to shows and customers. To my customers in Scotland I send parcels of three to six dozen sections by passenger train, as the O.R. rate comes cheaper than goods rate No. 4; also more prompt delivery is ensured. So for shorter distances the No. 4 rate goods is the cheaper means of transit.

Referring to the question of glass honey-jars, if your correspondent "W." (page 510) will write me direct to "The Apiary, Beedon, Newbury," I will give him the desired information re honey-jars. I see that Mr. Jarvis (6151, page 513) mentions the frames I use; but I feel sure I did not write explicitly enough as to the "standard frame" I was advocating some ten years back. They are still in use, and work well even with some of the original combs in them—flat as a board—though dark with age. They were made for me by Messrs. Abbott Bros., and are of their usual broad-shoulder pattern, the only difference being the extra width in top-bar and side pieces. I have tried a few metal ends of the "Dr. Pine" pattern and also the "W.B.C." tin end, but I always weed them out, preferring Abbott's frame, as I consider it stronger and less liable to sag or twist, and, what is of far greater moment, warmer by reason of confining the warmer interior air of the brood-nest better than metal ends—a great point in winter and spring in our fickle climate. I also still stand by the "combination hive," taking fourteen or fifteen frames, hanging parallel to entrance. It gives the busy man a chance of manipulating his bees when those in the square ten-frame hives cannot be touched, as the space at back of dummy, when the dummy is removed, gives ample room to handle and examine the colony on nine or ten frames without exposing the brood to chances of chilling, and thus retarding the development of the colony when every effort should be made to push it forward to the boiling-over condition by the time of the first honey-flow.—W. WOODLEY, Beedon, Newbury.

*** ERRATA. — Page 502. For "function" read "junction."

A SWARM SIX MONTHS IN A HEDGE.

[6156.] In the third week of December I heard that a swarm of bees had been clustered in a hedge two and a half miles from here since last summer. Having received permission to take the bees, I went as soon as possible to ascertain their condi-

tion. The swarm must have been a very fine one to allow of the great strength in numbers of the bees at this time. They had clustered on the north side of the hedge, and built half a dozen combs of average size with the tops and one end attached to a maple stub on log. The combs and bees were fully exposed to the north-east wind, and there was no food to be seen. On this latter account I was anxious to hive the bees, and December 21 being a suitable day, I set about the work. On making a start I had a "warm" reception. The bees had, I found, enough food at the rear end of their combs to last them three or four weeks, and what surprised me, even more than their numerical strength, was that they had three combs well filled with brood and eggs. The older brood was just hatching, and numbers of young bees were crawling over the combs after their removal.

It was with the regret that only a bee-man can feel that I was unsuccessful in securing these bees and providing them with a comfortable home, seeing that about one-half of them, along with the queen, passed through a small hole in the log to a place where I found it impossible to reach them, and, in consequence, I had to leave them to the fate that, in any case, would have overtaken them later on. But, in addition to the disappointment in having to leave the poor bees to perish, there was the great longing I felt to secure the queen, whose prolificness seems almost beyond the imagination of the average bee-keeper.

This colony of bees "in the open air" confirmed my previous experiences that when a swarm clusters on the side of a hedge, where the bees are not affected by the sun shining on them, the bees will, in most cases, make themselves comfortable for a considerable time. In another case that came under my notice the swarm built small combs on the branches on which the bees clustered in an open hedge, and left later as a hunger-swarm. One thing which the swarm first referred to above brings into prominence is the amount of discomfort that bees will endure when possessed by that important item numerical strength.—W. Loveday, Hatfield Heath, Harlow.

HONEY CAKES AND BEE CANDY.

[6157.] The illustration in the B.B.J. last week of the honey-cake hive I sent you came as an agreeable surprise, and I thank you very much for having inserted it. As I still receive letters from time to time from bee-keepers wanting the recipe for making honey-cakes, I would ask the favour of your allowing me to refer them to the short recipe I sent you, which appeared in B.B.J. December 24, 1903, as I have no time to transcribe it for all.

I now enclose a sample of plain candy which was made in 1903, *without honey*. It was my intention from the beginning to make this for sale in addition to the honey candy, knowing, as I do, that some bee-books, and some bee-keepers, deprecate the use of honey being used in candy making for bee food, but my intention has been postponed till now for one reason or another. Lately, however, I had a somewhat lengthy correspondence about candy and candy-making with Lieut.-Col. Walker, who encouraged me very much. He found that the price of my honey-candy (sold by Mr. George Rose), was rather high for general use, and I agreed with him in this. I then suggested making a candy *without honey*, to sell at 6½d. per pound, on which the Colonel replied that at this price he would rather buy his candy from me than make it himself, as my candy was so good, and so much above the indifferent hard candy sold by most makers. After seeing a sample made a year before, he wrote as follows:—"I really esteem your candy as quite excellent. I do not think anyone can make candy so soft and smooth in grain as yours, and I am astonished that it should be possible to produce it from sugar alone, without any addition of honey. My idea was that without honey the candy would harden to such an extent in, say, twelve months, that it would be then too hard for bees. This seems not to be the case, as yours is still excellent." You will understand by this that I sent him a sample of candy made in 1903, and another made quite recently. Col. Walker also allowed me to quote his name to any enquirer, and moreover, should I decide to make this candy for sale, he had no objection to his name appearing in the advertisement. Having, in consequence of its merits having been recognised by so highly esteemed a bee-keeper, decided to make it for sale, I would be grateful if you could allow me to draw the attention of readers to this candy, and to my advertisement on page v. In order, also, to avoid confusion, I might mention that this candy will be sold independently of the honey candy, which will continue to be sold as already mentioned, and that it contains no honey, yet is as smooth in grain as the honey candy; it is also guaranteed to keep soft for years, if kept in a suitable place. I will send a sample of this candy, and of honey-cakes, to all applicants who forward two stamps. The price of candy, as will be seen in advertisement, is 6d. per lb. Thanking you again for all past kindnesses,—Br. Colomban, St. Mary's Abbey, Buckfast, Devon, December 29, 1905.

[The sample sent to us of candy made

without honey in 1903 is perfectly smooth and "buttery" in grain, quite as good as if made yesterday.—EDS.]

BEE NOTES FROM HANTS.

HEATHER HONEY FROM LING.

[6158.] I have read with much interest the description of heather honey by Col. Walker in B.B.J. of December 7, and in reply to his query as to heather in Surrey, I have been able to obtain some delicious sections just over the Hants-Surrey border, where the ling is knee deep on hill and vale for miles around. The bell-heather was just dying off as I took my hives out there, so that I think the sections I was able to secure are of pretty genuine heather honey. I particularly noted the lovely scent of the heather on fine, warm days, when the bees were busy, it being noticeable for many yards from the hives. One stock I had filled a rack of sections in ten or eleven days, and this from strips of foundation. The bees were just beginning to seal the combs over when the weather changed, and it was about as much as they could do to finish their job, as we had no settled weather afterwards. Some of these sections are in my cupboard now, and the delicious scent is noticeable as soon as the door is opened. The honey is like a jelly, clear and bright, the flavour makes one cry out, like Oliver Twist, for more! I find, however, that the clover honey is preferred before the heather in this part, but personally, I am very partial to the latter, and I do not wonder that our Scotch bretheren declare there is no "flavour" in our "flower" honey.

I had the opportunity to drive some skeps at this place, and never in my experience have I carried such a weight to the "operating table." On one of the hives I took to the heather, was a box of shallow frames, about half filled. I got it filled and sealed at the heather, and had to press the combs in order to get the honey out. A few days after it was jarred off, the honey "thickened," becoming like a stiff cream in consistency, while the flavour was very good. As I have had no experience with extracted heather honey, I ask is this due to the presence of the "flower honey," or does the heather honey turn the colour of cream when solid? I must, with others, tend my best thanks to Bro. Colomban for his recipe for soft candy; I have tried some, and it turns out better than any I have made.

With regard to hive roof coverings, instead of the "Willesden" paper mentioned by your correspondent, Mr. Newth, I am using a cheap calico. First I "prime" the wood, lay and stretch the calico on, turn it under, and tack it down, now another coat of priming, followed by two coats of white paint. I daresay it will soak up more paint than the "Willesden" paper, but it should prove very effectual. The season in this part of the country has been an average one, my two best hives gave me 230lbs.

About glass honey-jars, where does friend Whitfield (B.B.J., December 21, page 504), get his bottles from, to cost 2¼d.? I think he can get them much lower than that, in these days of cheap jars. I obtained some very good screw caps at about half his price, after paying carriage, and only had two broken in a two-gross lot.

I have used cork dust cushions for some years, and find they keep stocks dry and warm. The bees are always found clustering close up under them. I make a bag 20 by 20 inches, put cork dust in until it will lay 2ins. thick when pressed out flat, this will cover the top of frames nicely, and when candy or feeder is on, by working the cork dust about, all can be made snug and warm. Wishing all brother bee-keepers, including the Editors of B.B.J., a right happy and prosperous new year,—F. D. HILLS, Alton, December 27, 1905.

HIGH RATES AND OWNER'S RISK.

[6159.] I am sorry to trouble you again but Mr. Woodley, in his "Notes" on page 501, is conveying a totally wrong impression on the question of railway rates. He objects to my quoting rates for ton lots, and I am, therefore, sending rates for weights up to one cwt., distance same as before, *i.e.*, 209½ miles, 28lbs. 1s. 6d., 42lbs. 1s. 10d., 56lbs. 2s. 2d., 70lbs. 2s. 5d., 84lbs. 2s. 9d., 98lbs. 3s. 1d., 112lbs. 3s. 6d. As the distance a consignment is to be carried decreases, so also does the rate. For instance, Birmingham, distance 80 miles, 28lbs. 11d., 42lbs. 1s. 1d., 56lbs. 1s. 4d., 70lbs. 1s. 7d., 84lbs. 1s. 9d., 98lbs. 1s. 11d., 112lbs. 2s. 1d. I do not contend that these rates are low, nor did I say so in my former letter, but I do say they are fair and moderate when one thinks of the value and frailty of commodity carried. But Mr. W. apparently considers that his comb-honey should be carried at the same rate as a small quantity of scrap iron would be charged. I make bold to say that all the bee-keepers' associations of the British Isles, if combined, will never persuade railway companies to do this, especially when we find such beemen as "White Clover" (B.B.J., 1905, page 117), coolly asking them to pay 30s. as compensation for three shallow frames of comb-honey.

Mr. Woodley also goes on to say, "No one can localise the misconduct of the

(*"Correspondence" continued on page* 6.)

HOMES OF THE HONEY BEE.

THE APIARIES OF OUR READERS.

The little apiary illustrated below might truly be called a London bee-garden, located, as it is, within an hour's walk of our offices in Henrietta Street. It will also probably surprise many readers to know that within the area of London smoke, honey can be gathered of good quality and in quantity "quite up to the average of most apiaries I read about"—to quote our friend Mr. Golds' own words. For the rest, his "notes" speak for themselves. He says:—

As a result of the gardener's suggestion, I purchased a stock of bees in a frame-hive in June, 1900, knowing nothing whatever at that time about bees; but with the aid of the "British Bee-keepers' Guide Book," and the *Bee-Keepers' Record*, it soon became a hobby. By the end of the season I took my first rack of sections, every one being well filled and capped. The honey was also of good quality and colour. Unfortunately, however, my first stock died during the following winter, a mishap no doubt caused by my inexperience. In the following spring I started again, this time with two stocks, both of which worked well, and yielded an abundance of section honey. Since then, I have added to my apiary, and now have eight hives, seven of them showing in photo, three of these being this season's swarms, all of which I hived without much difficulty. With regard to my system of management, I have made it a rule always to transfer each of my stocks in spring to clean body-boxes and newly painted hives with clean quilts, and by using naphthaline between body boxes and the outer-cases of all hives, I am pleased to say foul brood has never appeared among my bees yet.

Although only four and a half miles from Charing Cross, the bees gather honey of good quality each season, and quite up to the average quantity of most apiaries I read about, the lime blossom being the source of my principal harvest. I work both for sections and extracted honey.

To my mind the main things in bee-keeping which point to success are to have scrupulously clean hives, with young queens heading every stock, and leaving the bees with an abundance of stores for winter. I do not allow my swarms to be long idle, giving two or more frames of brood from strong stocks, when they at once commence building-out foundations and gather honey.

I have derived great pleasure from bee-keeping, and, but for having to keep very close to business, I would launch out on a much larger scale, as it is a most interesting and healthy hobby, and it is a great surprise to me that the working classes do not take it up more freely, as it would be very remunerative to them.

In conclusion, I may add that my daughter (of 16 summers) has lately shown interest in bee-keeping, and, consequently, her help is becoming valuable in my somewhat small apiary.

MR. OWEN A. GOLDS' APIARY, HIGHGATE, LONDON.

"High Rates and Owner's Risk,"

(continued from page 4)

porter." I beg to inform him that to my knowledge not one-tenth of the claims paid by the railway companies for goods damaged which are carried at "owner's risk," are localised by the claimants themselves. Then as regards "packing," I have enough common sense to know that men of Mr. W.'s experience are perfectly capable of packing a box of sections, so that they will travel safely, but I have myself seen six glazed sections "packed" and sent by rail in a brown paper parcel. I have also several times booked comb-honey packed with no better protection than light cardboard boxes. But to go away from comb-honey, have we not had it recorded in our own JOURNAL that empty store-combs in frames have been sent to purchasers packed in sack bags, and of 28lb. tins of liquid honey put on rail without any packing whatever? Almost every week I see bottled cream put on rail in cardboard boxes (gross weight 30 to 40lbs.), and porters' attention drawn to the fact that it is "Cream, and not paving stones," and this, too, by a firm who can pack cream as untidy as most folks, yet, strange to say, breakages are remarkably rare, considering the packing. I would also like to ask if Mr. Woodley's logic is not a bit "off" when he says:—"I have had a piano, chimney piece, fire-grate, bottles, bedstead, etc., broken by railway porters," and that, in consequence, they (the porters) "break nearly everything they handle." This is, to my mind, neither sound sense nor accurate. But so far as not being able to get any redress for the misdeeds of the grossly careless porter, how does it fall into line with the following quotation from Mr. Woodley's "Notes" in B.B.J., 1905, page 134. He says:—"During some 25 years, after thousands of consignments despatched per G.W. Railway, I have made three claims only, and in these I claimed no more than the market value at the time, and I will give the G.W. Railway credit for prompt settlement at full amount claimed." Our friend Mr. Woodley may be able to explain this flat contradiction, but so far, I cannot understand it.

In reply to my other critic, Mr. G. F. Saunders (6149, page 513), I may be excused for saying he may be a good bee-keeper, but he does not shine as a business man, and I should advise him to either improve his present business methods, or give up bee-keeping, if he has any consideration for his pocket. Had I been sending his consignment of honey from Dorking, I think I could have got it carried for one-third the amount it cost him. I use the word "think" advisedly, because of not being certain that the S.E. and C. Railway has adopted these low rates; but it seems very unlikely that they are so far behind the time as this. Mr. Saunders need not complain because he does not handle tons of honey. The railway company is thankful for his dozen pounds of honey, and will treat him with the same amount of courtesy as if he consigned a ton. I should also like to say a word to "A Brother Signalman and Bee-man," "J. P." (6150, page 513). He says, "most exhibitors know or ought to know— the rate at which honey should be carried." He has read friend G.F.S.'s letter, and he can now say—they ought to know, but *don't*, nor do they take the trouble to ask. My remarks above to Mr. W. must serve as a reply *re* localising breakage, and, regarding his show lot to Wales, I beg to say he also is a bee-man who has failed to press the railway company for his just due. Your correspondent "White Clover" got 21s. for his three frames of comb-honey. Mr. Woodley succeeded with the only three claims he ever made up to last April, and it is not for me to explain why "J. P." could not get his, unless he had not the courage to press it; because, as a railway servant of 32 years' standing, he must know that station masters or persons who are in the position to receive claims are not allowed to admit liability on the part of the railway company unless he has had authority to do so from his traffic superintendent or goods manager. Besides, to my mind, three days is a remarkably short time for a claim to have been "sifted" through possibly dozens of hands. I do not say his case never went forward, but I am strongly of opinion that the station master, or whoever the claim went to, took upon himself to refuse the claim because of its being carried at owner's risk. This is done with hundreds of claims every year, which railway companies never hear any more about. I must apologise for the length of my letter, so I will conclude with the best of good wishes for 1906 to bee-men generally, and our Editors in particular.—J. HUXLEY, Flintshire, December 29, 1905.

UNITING BEES.

A LADY BEE-KEEPER'S FIRST SEASON.

[6160.] Some time ago you kindly gave me advice about uniting two weak stocks of bees. I am glad to say the operation was quite successfully carried out, and all has gone on well since. Late on in December the bees from my three hives were busy taking in huge loads of pollen from the wallflowers and ivy in bloom in the garden; often there was such a merry hum in the neighbourhood of the hives, that one could hardly believe it only

wanted a fortnight off Christmas-Day. Will you kindly tell me if syrup prepared for autumn use can be used in the spring, if more water is added to it, and boiled up again?

This is my first season of bee-keeping; I had 30 pounds of section honey from one hive, and a large swarm from the other; my third stock consists of two lots of driven bees, secured from an old country woman in the autumn. Her daughter-in-law told me that she did not think that her mother's bees would be worth having, as she was quite sure they were too old to gather honey! "Why," she said, "they must be nearly thirty years old! She has kept them in the same place ever since she had them, and I'm quite sure they must be nearly worn-out, poor things. Why, last year they hardly gathered any honey at all, so I don't think it much use your trying them." Surely Devonshire bees are very long lived.—"HEATHER," Sidmouth, December 30.

COVERING FOR HIVE ROOFS.

[6161.] I think it would be of general interest if Mr. G. S. Newth would give a little more information about the use of "Willesden" paper for making hive roofs watertight, as mentioned in B.B.J. of December 14 (page 494). I should like to know if he uses a thick or thin quality, as it is made in 1, 2, 4, and 8-ply; also if he sticks it to hive roof with thick paint, and how many years he has used it? As "Willesden" paper is made 5ft. wide, there would not be much waste, and if it is all the manufacturers claim it to be, should prove a veritable boon to bee-keepers, the price being most reasonable. Wishing you, Messrs. Editors, the compliments of the season, I send name, and sign "PLEASURE AND PROFIT," Bucks, December 30.

[We will call the attention of Mr. Newth to the above, and have no doubt he will send a few lines for publication in reply.—EDS.]

BEE PARALYSIS.

The following paper, dealing with the disease known as bee paralysis, secured the premier place in a competition for prizes offered by our contemporary, the *Australasian Bee-keeper*, for the best article on the subject.

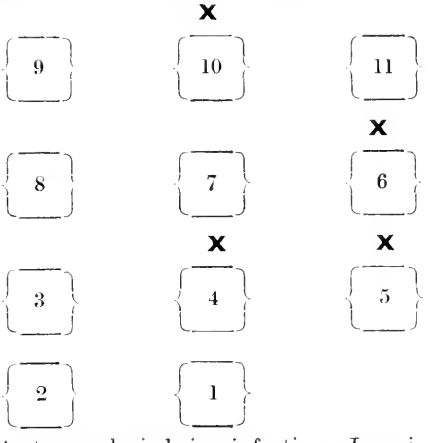
MY EXPERIENCE WITH BEE PARALYSIS, TREATMENT ADOPTED, AND RESULTS.

I have not noticed this trouble among my bees until this present season, when I noticed the bees of one of the hives coming out and dying on the ground in front of the hive. I was greatly puzzled at first, but after studying the matter for some time I came to the conclusion that it was a case of paralysis from the description given in different bee-books. The symptoms my bees had were these:—The abdomen became greatly swollen, the bee would crawl about the ground in front of the hive fluttering and vainly trying to get on its feet and to rise on its wings. In the early stage it might succeed in flying an inch or two, but they rarely got more than a yard or two away from the entrance. There was also a trembling motion of the whole body. Generally the bees thus affected seemed to manage to crawl and flutter about the greater part of the day, but were all dead by nightfall. I sought advice on the matter and was told that I would have to take drastic measures at once, but what those measures were I was not advised. However, I did something drastic, as follows:—I took all their surplus away, except one or two combs of sealed and a little unsealed stores. I bruised the cappings of the sealed honey, and dusted flour of sulphur well over the bruised part and into the cells of unsealed honey. Well, that cured the paralysis, for no more bees died in that hive after that; but it did something else; it stopped the queen laying, and the bees got to tearing down the cells, and stopped working altogether, so as the queen was not a valuable one I decided to destroy her, and united the handful of bees that remained to a hive close by.

I might say here I am firmly convinced it is the food that causes the trouble, for when I took the surplus from this colony I gave it to a weak colony which I did not value just to see what effect it would have. In a day or two they, too, showed just the same symptoms as the others. Two other hives (No. 5 in diagram), one about eighteen inches from the first-named hive (No. 4 in diagram), and the other (No. 6) about two yards to the rear were also affected about the same time, but they got over it without any treatment. But yet another stock (No. 10 in diagram) about six yards from the first, and one of my best honey gatherers of last season, got badly affected and began to die in great numbers. I was at my wits' end to know what to do, as I did not see the use of repeating the first experiment, so I decided to try something else.

I took away all their stores, sealed and unsealed, and as they were greatly reduced in numbers I contracted the brood-chamber, leaving them only a few empty combs (one or two contained brood) and put a chaff cushion each side of the frames to keep them as warm as possible. Then I made half a pint of sugar syrup, putting in a small teaspoonful of sulphur, and five

or six drops of Dr. Collis Brown's chlorodyne. The sulphur must be made up to paste consistency first, as it is hard to mix with the syrup afterwards. I also made the syrup a little warm. This I gave them in a "Simplicity" feeder on top of their frames. The sulphur settled to the bottom of the feeder, but I presume they got the benefit of it. I put the chlorodyne in because it is such a universal remedy for rheumatism, cramps, etc., in human beings. At any rate, that treatment quickly cured them, as no more died after they got the doctored syrup, and to-day they are doing well and working away as if nothing had happened.



As to paralysis being infectious, I am inclined to doubt this. I am sending you a rough sketch of the location of my affected colonies, by which you will see there were other colonies close by which should have been infected if infection theory is correct.

No. 4 was the colony first affected.

Nos. 5 and 6 slightly affected, but quickly recovered. United No. 4 with No. 5.

No. 10 last and badly affected, but recovered as stated. The other hives shown in diagram—Nos. 1, 2, 3, 7, 9, and 11—were not in the least affected.

Hoping this may be of some service to others, I remain, yours faithfully—H. M. Holloway, Roma, Queensland.

BEE-KEEPING.

HOW TO ACHIEVE SUCCESS.

(*Continued from page* 500.)

Spreading the Brood.—This is a practice which often fails, for the simple reason that the operation is performed the wrong way. I hold the opinion that the brood nest should on no account be divided into two parts by inserting an empty comb in the centre; yet this is the method almost universally followed. My own plan is to wait till the bees completely cover the frames upon which they are clustered, then place an empty comb next to the last frame on which brood is found, but on one side only. Then in a few days repeat the operation on the other side of the brood-nest as the necessity arises, owing to the increase of bees; but in no case divide the nest in two. By spreading the brood in this way, and by manipulating the feeder so that it is alternately placed over the newly-inserted comb, it forms one of the most efficient and safe methods of helping stocks into condition it is possible to imagine. Having practised this method largely myself, I am able to bring my stocks into good condition in a very few weeks. Good queens are, of course, a *sine quâ non*, and without such, stimulating of any kind is not of much use. The condition of all hives and quality of the queen should be ascertained when, and not before, the weather is favourable. Weak stocks may mean old queens, but not necessarily so. If no brood is found in the hive now, it is pretty clear that the queen is either missing or failing, and steps should shortly be taken to remedy the defect.

If a stock is examined at the end of that period for eggs, and none are found, it is certain that no eggs have been laid. The queen must, therefore, be destroyed, and the bees joined to the next stock twenty-four hours afterwards. To do this, bring the stocks to be united close together; then place the queenless bees in the normal stock and remove the empty hive right away. Do not disturb the bees more than necessary; a few puffs of smoke and a sprinkling of flour on each lot of bees, and placing the frames of broodless bees by the side of the combs of the normal stock, is the whole operation, done in a few moments.

Uniting Bees.—This operation should be deferred until April is well in. When a strong lot of bees is found with an unsatisfactory queen, or minus a mother altogether, the owner naturally will feel some disappointment. He knows that if a good queen could be supplied, the bees would have plenty of time with care to make a flourishing stock by the honey time. The difficulty is to obtain good queens at this season, seeing that such queens are already at the head of good stocks, and are valuable to the possessor in consequence; while those at the head of weak stocks are doubtful property, seldom worth having. So that unless the owners of queenless bees are prepared to pay a long price, there is no alternative but joining up the queenless stock to a queened hive, or, if the former is very strong, to join a weaker queened stock up to them. This latter operation is a little difficult. The stocks must be brought together as before; the useless queen is then found and destroyed, and at the time of joining up the good queen should also be found, and placed in

an introducing cage at the time of operating. Join the two stocks together with flour, as before, and then place queen on top of frames, to be released in twenty-four hours. My introducing cage is excellent for this purpose, and a description of same can be found in the "Guide Book."

Uniting and Dividing Colonies of Bees.—Here are two operations, each having a useful and necessary purpose, although of themselves diametrically opposite in their effect. Dealing first, then, with joining-up or "uniting," this operation is frequently necessary in spring and autumn. It is not at all uncommon to find bees queenless in the early months of the year. Sometimes the queen, being old and worn out, succumbs to natural decay, while not seldom untimely manipulations and unseasonable disturbance causes death of queens by what is known as "balling." At other times the queen or mother-bee, although still in existence and heading the colony, is far past her best day, and, in consequence, unable to produce sufficient young bees to bring the stocks into a flourishing condition by the honey-flow. It may go against the grain to destroy a queen and apparently sacrifice a stock, but under certain conditions it is by far the wisest course to pursue. A stock with a failing queen will do no good alone, and young fertile queens are often unobtainable early in the year, except at very high prices, and then often of doubtful quality, because common sense should convince any one that queens offered for sale before swarming begins are mostly from weak stocks, and therefore seldom satisfactory. By uniting the bees and brood (if any), it may serve to help on another stock having a good queen. On the other hand, uniting bees in autumn is often advantageous, because stocks weak in autumn very rarely winter well—at least, not nearly so well as strong colonies. Surplus queens, therefore, if of the current year's growth, are usually saleable if offered in good time, and this adds to the advantages of uniting in cash value. The method of carrying out this operation is practically the same at both seasons of the year. All that is necessary is to depose, or dispose, of the queens it is desired to be rid of. If old, they are worthless, and a pinch across the thorax instantly disposes of them. This done, gradually bring the now queenless bees to be joined up into close proximity to the stock to which it is proposed to unite them. This is done by nearing them two or three feet per day, taking care to move the hive only on such days as the bees are flying, otherwise many bees will be lost. Having got the hives close together, the remaining and final operation is simple. First find the queen and secure her in a cage such as is described on page 129 of Cowan's "Guide Book," draw the frames on one side so as to leave sufficient space for the combs of the queenless stock which contain brood to be inserted, dust both lots of bees with flour, using a flower-dredger for the purpose, and give just sufficient; don't smother with flour, but slightly dust the bees all over. Now join them together by alternating the frames of both hives in the one being dealt with. Then place the caged queen on top of the united stock so that the bees may release her during the next few hours. Remove the now empty hive right away and *do not examine* the united stock for a week at least.

Dividing Colonies.—This is an operation often ventured upon without sufficient knowledge of the requirements necessary. First and foremost, then, all stocks intended to be so treated must have ample time given them to requeen and build up into sufficiently strong colonies for wintering well. To do this successfully is seldom practicable if the bee-keeper expects both increase and surplus for any single stock in one season. Exceptionally favourable seasons now and then occur when this may be done, but very seldom. One stock from two or more and some surplus is possible in an ordinary season, but this moderate proceeding seldom contents the ordinary run of bee-keepers, as may be gleaned from your "Queries and Replies" column. The rule is to try and make three or even four stocks from one, and get a crop of honey besides. Needless to say, such ideas often lead to disappointment and worse. If two stocks are expected from one, very little surplus honey should be looked for, because, for the reason above stated, it is necessary to commence operations early in June. If the bees show signs of swarming naturally let them do so, and the desired increase is obtained; or if this be not convenient, or the bees will not swarm, the stock may be divided by moving it to a new stand a little distance away and placing a new hive on the old position furnished with five or six frames of comb; or, if these are not available, use full sheets of brood foundation. When all is ready, take from the removed stock one frame of brood, bees, and the queen, and place them in the centre of the new hive; close up frames and pack warmly down. Do this in the morning of a fine warm day, and at no other time. Feed both stocks. The new hive will now have the queen, some young bees, brood, and all the working bees; so it may be left to build up into condition. With regard to the removed stock, the case is different. That has brood and young bees, but no queen. Consequently, it must be requeened, and valuable time

is saved if a fertile queen can be given them after the lapse of twenty-four hours; or the alternative may be adopted of permitting the bees to rear a new queen from the brood within the hive. This operation requires some supervision, as it will not do to allow the bees to raise queens from old larvæ. It will be found that they will raise several queens at one time from larvæ of various ages. Three days after the division inspect the cells started, and destroy all that contain larvæ over twenty-four hours old. In other words—and as a rough guide—permit the bees to raise queens only from the very smallest of the larvæ, removing all the larger ones. If there are other stocks to be treated similarly to the first one, allow the colony in question to raise enough cells to provide queens for all stocks to be operated on, subject, of course, to be supervision already mentioned. To make three colonies from two, take four or five frames of hatching brood and eggs from a strong stock, brushing the bees into the colony to which they belong, filling up the blanks thus caused with frames of comb or foundation. Now remove another strong stock to a new location, and place the beeless brood and eggs in a new hive on the vacant position; cover all down warmly. The new hive thus has brood and eggs from one stock, and bees from the other (removed) stock. The new hive can be requeened, or a cell given, in twenty-four hours, or it can at the end of three days be permitted to raise a queen for themselves from the eggs which will then have hatched. I say at the end of three days, because, if allowed to raise queens before then, they will be inferior in quality, seeing that sufficient nurse-bees will not be hatched out to take charge of raising really good queens. Old bees are useless for this purpose, the eggs will provide material for suitable larvæ up to the fifth day, at which time a supply of nurses will be available. In this operation great care must be exercised in the choice of the brood combs to be used for the purpose. In rearing queens, the bee-keeper must in all cases supervise the arrangement, as above expressed, and don't forget to feed all divided stocks.

(Conclusion in our next.)

Queries and Replies.

[3988.] *Honey Gingerbread.*—I asked Bro. Colomban to kindly give me the recipe for making the honey gingerbread that your wonderful "Christmas cake"—shown on page 507—was composed of, and he tells me it was published in the B.B.J. of December 24, 1903. Would you kindly send me a copy of that number, if possible, for at that time I was not a bee-keeper? I would respectfully suggest that a reinsertion in your valuable journal would be useful to many of your readers who have but lately taken to bee-keeping.—FRED. J. H., Cranleigh, December 28.

REPLY.—As others besides yourself have applied for the recipe in question we have decided to reprint it in next issue.

Notices to Correspondents & Inquirers.

R. WILLIAMS (Brynrefail, Amlwch).—Bees Short of Food.—Your only course at this season is to give the bees a good-sized cake of well-made soft candy, placed under the quilts and right above the cluster. This done, cover up warmly, and after a few days, if the bees are taking the food, the quilts will probably feel quite warm to the hand if it is pushed under all coverings but the one next to the candy-cake. Do not try any but soft smooth-grained candy, such as that advertised in our prepaid column this week.

J. D. W. (Wolverhampton). — Railway Rates for Honey.—We are much obliged for yours dated December 29 on the above subject. You will, however, see that Mr. Sanders is fully answered in this issue by Mr. J. Huxley.

BEESWAX (Devon). — Candy-making. — Sample is not by any means good. We advise you to get a sample of Br. Colomban's own making in order to realise what good candy is, and then follow the recipe carefully in all its details.

M. P. R. (Bedford). — B.B.K.A. Certificates.—It is almost certain that the name as printed is a clerical error, and that you are right in supposing that a mistake has occurred.

T. B. BARLOW (Notts) AND OTHERS.—Swarthmore Bee-Books.—In reply to complaints from readers who have ordered copies of "Increase," by "Swathmore," we beg to say that, our stock of this book being exhausted, we ordered a fresh supply over two months ago. We have made enquiries of Mr. Pratt with reference to the delay in forwarding, and he writes to say that the First Edition having been rapidly sold out, a second is being prepared. He regrets the unavoidable delay in getting this out, but promises that no time shall be lost, though some necessary changes are being introduced into the new edition which prevent it being ready as soon as he expected.

*** ERRATA.—Our correspondent "H. Bee" calls our attention to a printer's error twenty-one lines from heading of his paper on "Bees and Their Enemies" (page 514). The words "true sparrow" should read "tree sparrow."

Editorial, Notices, &c.

REVIEWS.

L'A.B.C. de l'Apiculture, by A. I. Root, revised by E. R. Root, published by E. Bondonneau, Paris, 7 francs 50 centimes. This is a translation into French of that well-known book the A.B.C. of Bee Culture, which is a cyclopædia of everything pertaining to the care of the honey-bee, and is gleaned from the experience of thousands of bee-keepers, verified by practical work in the apiaries of the authors. The book in the English language has been most popular and has had a large sale, and this translation is from the last edition, which we quite recently reviewed and recommended. We congratulate M. Bondonneau on the able manner in which the translation is made, and the clear way in which the ideas of the authors are interpreted.

L'Apiculture Nouvelle is the title of a new monthly published and edited by E. Bondonneau. We have an advance copy of No. 1 before us. It is dated January 15, and is to appear on the 15th of each month. The number before us is beautifully printed on glazed paper, which brings out the illustrations very distinctly. It consists of translations of articles appearing in "Gleanings," and is intended to make those not reading English better acquainted with advanced bee-keeping as carried on professionally in America. The subscription price is 6 francs in France and 7 francs 50 centimes to other countries.

Correspondence.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

AMONG THE BEES.

Ancient Bee-Keeping and Bee-Keepers.

[6162.] From Hyll's volume onward books on bees were presented in quick succession. All of them claimed some "improvement" over what had been written before, some "new discovery," warranted to free their owners from the charge and trouble hitherto necessary, some method more advantageous than any hitherto practised. Their Government, breeding, sex, wars, enemies, honey, and wax were repeatedly written about, all represented as the result of experience. A great part of each book was devoted to a demonstration proving that what their predecessors wrote was ridiculously false, that they erred by ignorance, that they had not given one rational argument, that many of them deluded the world with whimsies. One accuses even Virgil of writing "more as a poet than an experienced bee-master." Each was ready in his own person to resolve "all doubts whatsoever," and as most of them wrote from the "unparalleled experience" of twenty, thirty, or even more years among the bees, we get some wonderfully wise words from all their works. I glean a few about bees, their homes, their honey, and their masters.

The Bees.—Have their story. The "married" hives are always the first to swarm, and they send out the largest swarms. Never kill bees. The same number of bees will do more good together than in two parcels. They honour and reverence their king, not from any fear of punishment, but from love, and they cannot be ruled or guided without their king. On his departure the bees laboureth not, but grieve with a continuous mourning. The greater bees were "discommended," the small and active commended. They excel all other insects in art, wisdom, forethought, industry valour, and loyalty. What artificer is so exact, what geometrician can imitate her works? Bees are political creatures and destinate all their actions to one common end, one common habitation, one common work, one care, one love to young and commonwealth. In their labour at home and abroad they are so admirable that they may be a pattern to men, and for cleanliness and neatness they may be a mirror to the finest dames. They are models of industry, and doth ply their labour like men in harvest. Second and third swarms should be returned, also virgin swarms, as they seldom survive winter and never pay for amount of honey garnered by their small forces.

Their Homes.—Experience proves that straw hives are rather preferable, although "colonies" allow bees to thrive "pretty well." Transparent hives were, however, well known three centuries ago, and were "discovered" in the first century at least. Mewe kept "a diary of their negotiations" in such hives, wherein he wrote down of their daily income, and what hath been done all day. He saw they always began building at the top and worked downward. "Capping" hives was known then, but they worked mainly on the naidering system, inserting a second story below the first. They should be placed near the house, in a sheltered place, near flowering trees. Anoint a hive with sweetened water or honey before hiving a swarm, a hog's "slavers" serveth well says one—any sweet herb says another. First however, perge the hives of all filth, and smoke them to

kill all worms, grubs, and moths. Bee-houses were recommended by some, but in general the opinion prevailed that for many reasons "single stools" were best. Collateral hives were also recommended, and so were colonies, but "strawen" hives were the almost universal home of the bees till a very late period. Yet bee-keepers were always in search of a home from which they could take the honey and save the bees. No fear of any district being "over stock't," as almost everwhere one hundred hives can be kept, where hitherto there has been one. The size of hive should be regulated by the size of the swarm. Contract and extend entrance according to the season and strength of the colony.

The Honey.—Pleasant words are as an honeycomb sweet to the soul and health to the bones. Sweet dropping words like honey he did shed (Spenser) pure *virgin honey* because of its goodness and superior excellence, being perfectly neat and fine, is worth more than the common. Charles II. was fond of such honey, provided from the apiary of his royal bee-master, Dr. Rusden. Varro avers that a very fair yearly revenue can be made of honey, and that without killing the bees. Dr. Warder made £50 a year from his bees. Many others might be named who derived a good income from the sale of honey and wax—there being no sugar in olden times made this valuable sweet much more highly esteemed. Nectar was not honey. Bees do suck out of several things, nay, almost innumerable flowers, of all of which they make honey—by a peculiar fermenting virtue they really transmute what they gather into honey. Yet some held honey was a "sweet from heaven, or a spittle of the stars." The combs were generally simply cut out and honey "pressed forth by a heavy waighte," so that it ran or dripped forth. Hill, our first writer, however, advised that the first and second-class honey should be kept "diligently apart." Skimming was advised, and he knew that the best settled below. Attica honey had a "great reputation." Of Hybla and Hymettus honies, it is declared "in goodness they are notable." This delicious sweet is described by Butler as the "very quintessence of all the sweetness of the earth."

The Bee-Keeper.—A bee-master must not be unchaste or uncleanly, for impurity and sluttishness bees utterly abhor, they themselves being most chaste and clean. The best bee-master is a water drinker, for bees only drink water. Experience is the best teacher—always believe your own eyes if you see a thing ten times. The pursuit is health giving, and many a man out of health and spirits has gone to bask in the clear sunshine amongst the bees, and has thus for a time at least forgotten his cares or his pains, with heart attuned to their sweet music. Many were close observers of bees. "If every bee-master would watch for a few minutes of his spare time every day, and write down plainly what he sees, we should not be long in the dark." Many mysteries were thus unravelled and difficult problems solved, still they have left a wide field for modern explorers. One writer says, "every time I view them I see something new. The bee-master should entreat the bees with a gentle manner, then will they love him. He should wear no offensive apparel, and be clean about his person. Touch not bees or honey with unwashed hands." I conclude my observations about these ancients by quoting the following excellent words: "A leisurely and calm deportment succeeds best, with gentleness yet boldness, and giving them the least disturbance."—D. M. M., Banff.

PAINTED QUEEN BEES.

IN OBSERVATORY HIVES AT SHOWS.

[6163.] I am somewhat disappointed at not seeing a reply from some of our judges to the letter of Mr. R. Godson (6102, page 456), on the subject of "Queen bees daubed with paint." Perhaps the latter part of our Editor's footnote may have influenced the "competent judge" in deciding that "silence is golden" in this case. Not being included in that category, and being the "dauber" in question, I naturally take a different view of this subject, and my opinion is shared by no less than six competent judges, who have awarded me five first and two second prizes for the only seven times that I have staged "daubed" queens in observatory hives; the two lower awards being obtained by a "badly ventilated hive," as expressed by the judges at the time. Therefore, I have yet to wait for a disqualification of my observatory hives, on account of the queen-bee therein being painted of a different colour to her subjects. I also venture to think that that same judge would not disqualify an exhibit of English bees with a Cyprian or Golden Italian Queen as head of the colony. Since I first exhibited an observatory hive with a painted queen therein, I have had many letters of inquiry as to how it is done; therefore, it evidently has its good side.

It is not a new idea, and my thanks are due to the blind Francis Huber for his book "Nouvelles observations sur les Abeilles," therefore it was practised, at least, in the beginning of the last century, and it was precisely for the same object that I painted the queen bee, viz., for observation purposes. Surely that is legitimate in an observatory hive where everything is in an artificial condition! If the

objection to painting is raised because it spoils the fun of a puzzle, then I can quite understand, for the queen can be seen immediately amongst the worker bees, at a distance of several yards.

I paint the queen bee for contrasting purposes, and judging by the number of people who are attracted to my exhibit, compared to those where the queen is not painted, it certainly achieves that object. I also believe that the non-bee-keeper is more interested by this contrast, as he is enabled to make a comparison more readily than is usually the case. I always place a note at the side of the exhibit, stating that "the queen bee is painted for observation purposes," but apart from that, anyone of an inquiring disposition will readily admit that the manner in which the queen is painted does not cause her identity to be lost. I have also found it very useful for requeening purposes, for if the painting is properly done, it is harmless, and will last for years, and if the colour be changed or varied, according to season, it enables one to know at a glance by the colour, the age of the queen, while I can also determine absolutely whether that stock has requeened itself or not. This is a great advantage when on wholesale requeening bent, as being a great time saver; so much so, that the lady mentioned in a recent article in the B.B.J. (vol. 33, page 336) as being able to find 100 queens per day, would be able, under this system, to find over 500 queens in the same time.—T. W. SWABEY, Bracebridge Heath, Lincoln.

[In the letter referred to Mr. Godson asked for our opinion on the practice of "daubing the queen bee with paint" in observatory hives, "as we frequently see on the show-benches in Lincs.?" We gave our personal opinion as a judge, whose experience is as great as that of most men, and gave it unreservedly. Nor has our view yet been controverted. On the other hand, we are glad to know that, so far, the practice in question appears to have been confined to local shows in Lincolnshire; therefore, if our correspondent is desirous of obtaining the opinion of other judges, he should enter his observatory hive and its painted queen at a leading show outside Lincs. He would then probably get the opinion of judges to whom queens, daubed with paint, in observatory hives was a novelty.

Most bee-keepers—ourselves among the rest—have deplored the prevalence of the bee pest known as braula cœca (or blind louse) in some districts, because of the constant worry, and no doubt, suffering, inflicted by the parasite on any unfortunate queen bee infested by it. But when Mr. Swabey tells us of his methad of painting and repainting in various colours, "according to the season" (so that "it will last for years"), the mother bees used for queen-rearing in his apiary, we think it about time to protest against such needless cruelty, and we hope that his example will be followed by no bee man who sets any value on that industrious little labourer the honey bee.—EDS.]

MYSTERIOUS LOSS OF QUEEN-BEE.

[6164.] In re-perusing some back numbers of the B.B.J. I notice in the issue for October 5 last, your esteemed contributor "D. M. M., Banff," deals with the mysterious disappearance of a valuable queen-bee sent to him from America as a present—a loss with which all bee-keepers can sympathise—and perhaps the following experience may be a key to the solution of the matter:—

In early October I was worried at not finding any brood in one of my hives and as there were plenty of stores, I was unable to account for it. I had read in a previous number of B.B.J. of a queen not laying on account of irritation caused by *Braula cœca*, so catching the queen and finding she was troubled by the pest above mentioned, I thought I would fumigate the queen in order to free her from the parasites. So taking her indoors, and lighting a cigarette, I commenced operations. I had, however, hardly commenced smoking when she flew towards the window, but just failed to reach it and fell between the bed and the back of a sofa (the hollow between the lots of upholstering), completely out of sight, and if I had not been intent on watching her, there would have been another good queen to deplore. As it was I had a difficult job to get her out. If she had not been excited, and thus rushed up the groove caused by depressing the bed of the sofa, I should have had to await her convenience or let her perish. I may say she was clear of the blind louse when recaptured. — J. D. W., Wolverhampton, December 28.

SENDING SECTIONS BY RAIL.

[6165.] In reference to the correspondence on "Railway Rates," I should like to say that I send all my section honey by goods train packed in half-gross lots in a "Tate" sugar box or similar one, and I have had very few complaints of broken sections. Two years ago I sent two similar cases from Oxford to Sunderland—a distance of over 200 miles. One case was sent by the G.W.R., and weighed between 80 lb. and 90 lb.; cost for carriage 3s. 3d. It was three days on the way, and arrived safe. The other box (same weight) went by L. and N.W.R., cost 3s. only, but was nearly a week on the way, and on arrival

had eight sections damaged. The consignee claimed damages of the company, and, I suppose, got them, as I never heard anything to the contrary. I have sent several gross of sections in this way to London, and find that if properly packed—i.e., tied in parcels of half-dozen and well surrounded with straw or hay—they will travel almost any distance safely by goods train. The carriage to London from Oxford—sixty-three miles—comes to about 1s. 9d. for 90 lb., which is certainly not excessive. I have little experience of sending honey by passenger train, but what little I have sent has always arrived safely. Wishing all readers a happy and prosperous new year. — MID-OXON, January 4.

ODDS AND ENDS ABOUT BEES.

[6166.] *Birds and Bees.*—Looking back over some past years' B.B. Journals, I notice that the same stories of birds eating bees have come to the surface repeatedly. I can only vouch for actually seeing one sparrow snap one bee on a mild day in November. Some winters ago I noticed on the snow under a hawthorn tree numerous remains of bees. However, on seeing the deed actually done, thoughts of a gun and revenge were instantly subdued on the recollection of those memorable lines of Burns (I suppose his name is known south of the Cheviots)—

A daimon icker in a thrave's
A sma' request,
An' thou maun live *my little* frien'
As weel's 'the rest.
(From the "Mouse").

"Wells" Hives.—My colonies in these useful hives got rather out of hand this year, though they have usually done well. A couple swarmed and entered the neighbouring wells, which in turn swarmed next day. I caught one queen issuing and removed the "Wells" to a new station and got a fine swarm returning to a swarm box placed on the stand with the queen caged. On examining the "Wells" removed I found queens in both divisions and no queen cells. So it would seem that two queens had been in one hive for a night. In the mix up only one queen was lost, but I could not determine how.

Honey.—There are no cultivated fields nearer than two miles of me, and the honey gathered is of three distinct varieties, or blends, viz.—Hawthorn, natural clover, heather, or blends of the first and second, or second and third. The crop, as you may guess, is not a large one. In general 20 to 25lbs. per hive. This year the average worked out at 42lbs. per hive run for honey. The best hive yielded 26lbs. of hawthorn, 52 of clover, and 26 of clover and heather. Then stocks were removed to the heather 8 miles away. The cartage cost me 16s., but it was good outlay, as I got 140lbs. of pressed honey, a score of well-filled saleable sections, and the body-boxes literally packed with stores, so that almost for the first time in my experience I have not needed to feed.

"When Doctors Differ."—Good authorities differ as to what is the best size of a nucleus, some advocating full size standard frames, some half frames, and some tiny frames on the Swarthmore plan. I would not like to rush in the face of any successful method, but with me the Swarthmore hives 2s. 6d. each are not suited to the locality. Full frames are most expensive in bees, and though I have generally had three full frames to each, mating was not always successful. I have tried to work out a size that will be neither too large nor too small, one that gives three frames of comb from a single shallow frame, that is, my nucleus frames are the same depth as a shallow frame, but only 4½ins. wide inside—so that ten mating-boxes could be combed from a crate of shallow frames.

Small hives with single walls—6 in. square inside sloping roof, and detachable bottom—hold four of these frames. Three are sufficient, but a fourth can be added if necessary. This letter is already too long, so I will defer sketch and measurements till another week with further consideration of the subject.—D. V., Dunaskin, January 6.

KEEPING BEES NEAR ROADSIDES.

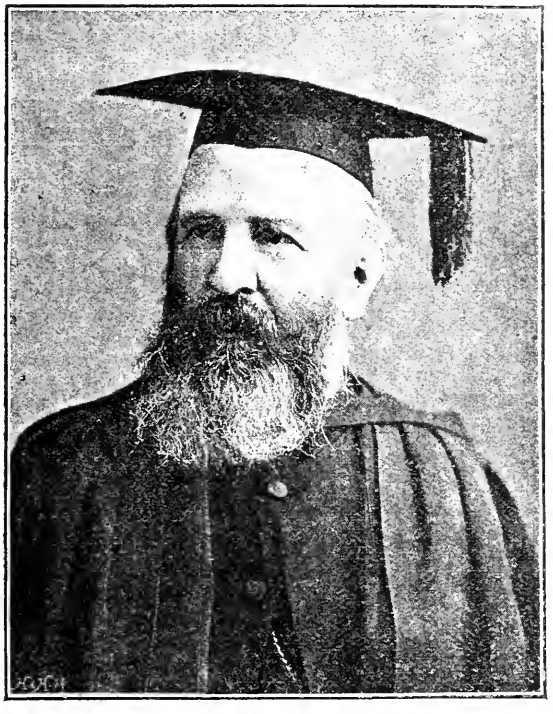
[6167.] I have many times seen questions asked in our B.B.J. by would-be bee-keepers whether it would be safe to keep bees near roadsides, or where children are in the habit of playing near where the hives would stand. For the encouragement of those who fear danger from this, I beg to give you my experience. I have kept bees since 1890, and for the first five years always had from 10 to 12 hives standing not more than ten yards from a much-used road, where harvest wagons and all sorts of farmers' carts and implements were passing, but never during the whole of that time have I heard of either men or horses being stung. Since that time I have been ten years in my present house, and the hives have stood less than twenty yards from the house with our nine children running about and playing near them, yet they rarely get a sting, and then it is usually when the little ones amuse themselves by scattering dust or soil on the bees as they pass in and out of the hive. This has happened several times, but though a child is terrified at the time they soon get over it, and certainly are all right again in a very short time—they forget all about it. We make

(*Continued on page* 16.)

THE LATE REV. E. BARTRUM, D.D.

The Rev. Dr. Bartrum, the news of whose death we received just as we were going to press, and announced on page 2 last week, was born at Sion Hill, near Bath, in 1833. He was educated at King Edward VI. School, Bath, and in 1852 proceeded to Pembroke College, Oxford, where he took honours in Classics, Law, and History. In 1856 he was elected to the second Mastership of his old school under the Rev. C. J. Macleane. In 1858 he took his degree of M.A., and in 1859 became curate (in addition to his Mastership) at the Octagon Chapel, Bath, to Dr. Magee, the late Bishop of Peterborough. In 1861 Dr. Bartrum was offered the head-mastership of Hertford Grammer School by the Right Hon. W. Cowper on behalf of Lady Palmerston, who held the patronage. In 1864 he removed to Berkhamsted on the nomination of Lord Palmerston, then Prime Minister acting for the Crown, and took the head-mastership of the school there. Under his able management it rapidly improved, and from fifty the numbers increased till at his resignation Dr. Bartrum left it a large public school with over 180 boys.

His connection with the B.B.K.A. began in 1879, although before that time he had become interested in bee-keeping in consequence of the able articles that appeared from time to time in *Journal of Horticulture* written by the late Mr. Woodbury. Visiting the Crystal Palace Show he was so struck with the splendid Stewarton supers shown on that occasion by his friend, the present Chairman of the B.B.K.A., that on his advice he determined to keep bees. Dr. Bartrum joined the Association at the same time as his friend and neighbour, the late Rev. H. R. Peel, and was for many years an active member of the committee. He interested himself in the examination of experts, and was one of the examining board, and devoted much time and care to the management of the finances of the Association. He worked with the movable comb-hive and the Stewarton, and was a great partisan of this system for some years. His little book, *The Stewarton: the Hive of the Busy Man*, attracted considerable attention to that famous Scotch hive, but for many years Dr. Bartrum had admitted the greater advantages of the movable frame-hive and kept entirely to this system. His subsequent experience of the success attending the bee-tent, and the manipulations with live bees, combined with *viva voce* explanations, led Dr. Bartrum to apply the same principle of teaching by the eye as well as by the ear to in-



THE LATE REV. E. BARTRUM, D.D.

struction in butter-making. In 1884, assisted by Lord Rothschild and others, he started a butter competition at Tring, Herts, the first attempt of the kind we believe ever made. In a letter which lies before us, written by one of the promoters of the Eastern Counties' Dairy Institute, the following passage occurs:—"I do not forget what we owe to you as the originator of the butter-making contests which have done so much to revive our interest in dairying." Through Dr. Bartrum's indefatigable zeal this method of combining practical work in public with oral instruction has spread rapidly through the land, and the almost lost art of butter-making is advancing with as rapid strides as modern bee-keeping has made in recent years.

In 1885 the Rev. E. Bartrum received his degree of Doctor of Divinity, and in 1887 he resigned his position of head-master at Berkhamsted, having been presented to the Rectory of Wales Colne, Essex by the Earl of Verulam. Both Dr. and Mrs. Bartrum were great favourites at Berkamsted, and the regret at their leaving was universal. On December 9, 1887, a meeting was held at Berkhamsted, at which were present many past and present pupils, parents, governors, assistant masters, and personal friends of the retiring head-master. At this meeting a beautifully illuminated address was presented: also a handsome library-table and valuable timepiece, as well as a portrait of Dr. Bartrum in an old oak frame with the school arms in centre. A handsome diamond bracelet was presented to Mrs. Bartrum—"From the boys and masters of Berkhamsted school." While at Berkhamsted Dr. Bartrum took an active part in the progress and welfare of the community around him. For twelve years he was a member of the School Board, for sixteen President of the Mechanics' Institute; he established a Penny Bank, which is now a flourishing institution, and assisted in establishing a Water Works Company, of which he was chairman for some years, and also in building a swimming-bath. His time was too occupied with scholastic duties to be able to devote much time to looking after bees while at Berkhamsted, but since his removal to Essex his parochial duties allowed him more leisure for bees and other rural occupations. Dr. Bartrum was well known as a writer in these columns, and his articles on bees and fruit were particularly interesting and instructive.

Dr. Bartrum took the same interest in rural occupation in Essex as he did in Herts, and has done much to encourage both bee-keeping and fruit-growing. He has for several years given prizes for English-grown apples at the local flower shows, and has also been a frequent exhibitor.

Of late years he had become very deaf, so that this affliction precluded him from attending meetings, but he was an able writer and has contributed largely to horticultural papers on the culture of fruit.

In 1880 Dr. Bartrum read a paper before the B.B.K.A. on "The Stewarton Hive," which he afterwards enlarged and published in 1881 under the title of "The Stewarton: The Hive of the Busy Man." In 1894, "Bee-Keeping" was one of a series of papers under the general heading of "The Present Distress, Especially in Essex; Some Remedies Suggested." Then, in 1897 Dr. Bartrum, with the Rev. R. McClelland, wrote "Bees in a Bar-Frame Hive." This was one of a series of handbooks under the general title of "Helpful Hints for Hard Times," of which Dr. Bartrum was the editor. He also wrote many pamphlets on fruit culture, and after a tour round the world a book entitled "From East to West."

Dr. Bartrum was taken seriously ill with heart asthma on Christmas day, and had suffered much at times, but he was easier at the end, and passed peacefuly away on Friday, 29th December last. By his death we lose another life-long friend, and one who was always ready and willing to assist us in advancing bee-keeping in this country.

It was by the saddest of coincidences that while the interment was taking place, on December 29, at Lansdown Cemetery, Bath, of Mr. Wm. B. Bartrum, there was passing away, at Wakes Colne Rectory, his last surviving brother, the Rev. Dr. Bartrum; thus the last two of the five well-known sons of Mr. Benjamin Bartrum, auctioneer, Bath, died within a few days of each other.

On behalf of ourselves and readers of the "B. J." we extend to Mrs. Bartrum and family our sincerest sympathy in their bereavement.

("*Keeping Bees Near Roadside*," *continued from page* 14.)

it a rule never to scold our children for being about the bees when stung, and the result is I never lack a helper in my bee-work as they grow up.

While on the subject of bee-stings I should like to say a word on the troubles we sometimes read of in our B.B.J. between bee-keepers and their neighbours from this cause. As already said, I have no trouble of this kind, but even if we had, I do not think it would ever be taken notice of for we always, when the season's harvest is removed, send the children round with a nice bit of comb-honey to our neighbours, so as to let them rejoice with ourselves at what the bees have done for us, and if at any time an erratic bee

should sting one of their children, they will not become unneighbourly but will take it in good part. I think it is a bad plan to leave the honey-sending till your neighbour has a cause of complaint, as it will not be taken so kindly as on my plan. On the other hand, I do not wish to give readers the idea that I have not had an occasional mishap with my bees. I have a very vivid recollection of one instance, soon after starting to keep bees. I was removing a heavy super from one of my hives when the top-bars in the broodchamber were stuck fast to the super without my knowing it, and when I had nicely released the super, as I thought, down fell the adhering frames of bees into a body-box below, and in a moment there was a "lively time." Luckily there were neither children nor neighbours about, so the bees "let go" at the poor pig in the sty. I ran and let the porker adrift, and he found shelter among the gooseberry trees, while I had to put the bees to rights as best I could. That day I learnt a lesson that will never be forgotten, namely, to make sure that the supers are clear when lifting them off.—Jos. HULBERT, Heckington, January 6.

LEAKY HIVE ROOFS.

[6168.] Seeing the recent letters in your valuable journal with reference to leaky hive roofs, and as I have myself tried all kinds of plans for preventing the trouble in that connection, I venture to send the following instructions for making a thoroughly weatherproof covering at a cost from 4½d. to 6d., and if your correspondent who signs himself "Pleasure and Profit" will "profit" by this "profitable" advice, he will derive more "pleasure and profit" from the efforts of his little workers the bees. My plan is as follows:—

Procure from the draper some thick buckram. This should cost 6d. per yard, or perhaps somewhat less by the dozen. Give the hive-roof (which I prefer of the flat-top kind, with a fall of 3 in. from front to back) a thick coat of what coach painters call "smudge," i.e., the contents of the receptacle for refuse paint. Stretch the buckram on roof while the paint is wet, and tack all round. When quite dry give a good coating of smudge outside, and when this is dry and hard, a second coat, finishing off with two good coats of paint. This, with a coat of paint once a year, will last twenty or thirty years, at the cost I have already named. Any coachbuilder will be glad to give the smudge for nothing.—FRED EVANS, Market Drayton, January 6.

WEATHER REPORT.

WESTBOURNE, SUSSEX,
December, 1905.

Rainfall, ·83 in.
Heaviest fall, ·18 on 5th.
Rain fell on 16 days.
Below average, 1·96 in.
Sunshine, 35·6 hours.
Brightest day, 6th, 5·1 hours.
Sunless days, 14.
Below average, 23·3 hours.
Maximum temperature, 54° on 7th.
Minimum temperature, 26° on 12th.
Minimum on grass, 23° on 12th.
Frosty nights, 6.
Mean maximum, 45 6.
Mean minimum, 36·6.
Mean temperature, 41·1.
Above average, 3 0.
Maximum barometer, 30 82 on 12th
Minimum barometer, 29·21 on 29th.

L. B. BIRKETT.

WEATHER REPORT

FOR THE YEAR 1905.

WESTBOURNE, SUSSEX.

Rainfall, 25·67 in.
Heaviest fall, 1·75 on June 5.
Rain fell on 182 days (above average 8).
Below average, 3 58 in.
Sunshine, 1,692·8 hours.
Brightest day, June 24, 15·5 hours.
Sunless days, 57 (below average, 6).
Below av., 149·3 hrs.
Maximum temperature, 79° on July 14.
Minimum temperature, 21° on January 27.
Minimum on grass, 19° on November 19.
Frosty nights, 62 (below average, 13).
Mean temperature, 49.9.
Above average, 1·9.
Maximum barometer, 30·95 on January 29.
Minimum barometer 28·83 on November 13.

L. B. BIRKETT.

HONEY-CAKES.

BR. COLOMBAN'S RECIPE FOR MAKING.

Ingredients.—3lb. honey, 3lb. flour, 1oz. *powdered* ammonia, a small teaspoonful of ground cinnamon, half-teaspoonful of ground cloves, 6oz. orange peel cut very small, 4oz. sweet almonds cut small.

Directions.—Pour the honey in a copper or enamelled pan, and set on a stove, or quick fire. When it boils, draw it aside and remove the scum (as honey boils up very quickly, great care must be taken not to let it boil over). Then pour the honey into the vessel in which the paste is to be made; leave it to cool; then add flour and other ingredients, except the ammonia, which latter must not be added till the flour and honey has been mixed up, and the paste has become quite cold. In preparing for use, place the ammonia in a cup, pour on a few drops of cold water and stir it well, so as to form a thick paste, then mix it up with the rest. Then take a piece of the paste, roll it out into a cake

not over a ¼-inch thick, and cut up into convenient sizes as desired. This done, put cakes on a flat tin (which must be greased beforehand), and bake from twelve to fifteen minutes in a hot oven.

BEE-KEEPING.

HOW TO ACHIEVE SUCCESS.

(*Continued from page* 10)

There are one or two more points to be dealt with before concluding this series of articles, and that most applicable to the present time is:—

Wintering Bees, which means preparing them for the season of rest. Very much depends upon the care and attention given in the autumn to our hives and their inmates so far as ensuring whether the bees will eventually come out in the following spring in a strong healthy condition and be likely to ensure success. First, then, all frames not covered with bees should be removed, and any stock in which the bees at this period d onot well cover seven or eight frames should be strengthened by adding either bees from weak but healthy hives or giving a driven lot from a skep, which latter is easily obtainable at this season. It is false policy to expect stocks found weak in autumn to stand the winter well and come out strong in the new year, even with the greatest attention to their well-doing. Having got the bees into a suitable space, the next point is to trace out whether or not the queen is perfectly satisfactory in all respects, to head the colony in the coming year. If this be at all doubtful lose no time in replacing her with a queen worth having. Attention must also be given to the food supply; 20 lb. to 25 lb. of sealed stores are necessary, and this weight of food, supplemented with a large cake of soft candy, will relieve the bee-keeper's mind on this point. If less than the amount stated is found in the combs give thick syrup (made as per "Guide Book" recipe) as rapidly as possible, taking care to feed only after sunset to avoid risks of "robbing" being started. This is most important at this season, because a hive badly robbed is thrown back almost hopelessly in the process, but often the whole apiary gets disorganised for weeks through the upset caused. Aim to get the above items attended to by the end of September at the latest. Hives having more than enough natural stores can be relieved of a part of the surplus, if desired, for the benefit of those less well supplied, as, in my opinion, natural stores are pre-eminently the best to winter bees on. In "robbing Peter to pay Paul," however, be sure that "Peter" is in good health, seeing that only disaster must follow if honey from an unhealthy stock is given to a sound one.

After feeding is completed, place an empty comb in the centre of brood-chamber for the bees to cluster upon; then lift the body-box and sweep the floor board clean of all débris; place the candy cake mentioned above on top of frames, quilt snugly down, and when the weather turns cold reduce width of entrance to 2 in. With regard to winter packing, I use none save on top, and up to the end of year I consider three fairly thick quilts enough covering overhead; after that date four or five are desirable, and a sheet or two of newspaper or similar material should be placed on top, and well tucked down at the sides to prevent escape of heat. Should the weather become very severe as spring approaches, reduce entrance to an inch or less and add more packing on top. At such times a large portion of the soft goods belonging to one's household usually vanish mysteriously where a large apiary is kept, and only reappear when they have served the purpose desired and the weather has taken a favourable turn, so that no risk is run by their removal.

Appliances.—Referring to these, I do not believe in straw skeps as homes for bees, nevertheless, I prefer skeps to cheese-boxes, lard-tubs, and the like for bee-hives. Suppose, for instance, we want the bees driven out for any purpose; it is comparatively an easy matter to drive them from a skep, but such other makeshifts for hives as lard-tubs and the like are, to my mind, an intolerable nuisance, and should be avoided, especially as a permanent home for bees. Frame-hives are admittedly far and away the best for all practical purposes in modern bee-keeping, and with so many good hives on the market the good points of which are fully set out in the catalogues of various dealers so that description here may be dispensed with. One point, however, must not be overlooked—viz., the necessity for interchangeability of all parts of all hives in the apiary. Nothing looks nicer than to see all hives of one pattern on one location, but interchangeability of parts is so indispensable for comfort and efficiency in working that it takes precedence over all others. For hive-making no timber is really suitable but good seasoned pine, free from knots and shakes. I have now in my apiary a few hives bought ten or twelve years ago from one supposed to be a good man in the trade that have been an eyesore to me for years, and some day I shall assuredly go for the lot and boil syrup with them! It is better to pay a fair price for a good article than to be tempted to invest in cheap (and nasty) ones. Home-made hives are all

very well if the bee-keeper is a good amateur joiner, with a well-made hive as a pattern; but I find the home product in most cases lacks something in actual work. Still they do very well in their way. Second-hand hives and appliances I cannot recommend, having in view the prevalence of foul brood throughout the kingdom. My advice is, *run no risks* and start with new hives and appliances only.

Bee-Diseases.—A few lines on this subject will bring my remarks on "How to Achieve Sucess" to an end. One of the first elements for ensuring success is that every bee-keeper should thoroughly acquaint himself with such reliable information as is obtainable regarding the bee-disease known as foul brood. The man who says, "I never had foul brood among my bees and don't want to know anything about it," is as one working in the dark. Moreover, should his bees contract the disease they will probably have it so bad before the truth becomes apparent, that it simply means ruin to his apiary. On the other hand, the man who acquires some knowledge of *bacillus alvei* will, on discovering an outbreak in its incipient stage, take especial care that it never gets beyond that point. The latter is on the way to achieve success in bee-keeping; but the other, of which I know many in real life, is a standing danger, not only to himself as a beekeeper, but also to the bee-community at large.

It is now so common a thing to hear individuals talk of there being no foul brod in districts where the disease is more or less rampant, that it becomes in many cases mere idle talk of people who have no real means of knowing. As a matter of fact, so far as my experience goes, there are few (even comparatively) places where no foul brood is to be found, and in many places it exists without those whose bees are affected being aware of the fact, so that no one is safe, for it appears like a thief in the night, and none know from whence it comes. The only wise course, therefore, is, as I have said, to become acquainted with its appearance. It is easily recognised, the yellowish, out-of its-proper-position look of the young larva being so plain that there need be no mistake if the disease is there; and as it advances the dark, sunken, and often perforated cappings of the brood-cells plainly indicates its insidious progress as it reaches the brown sticky mass of the last stage of rottenness. Smell is no certain test, and cannot be relied upon, but the brown coffee-coloured contents of cells in a badly-diseased comb once known is unmistakable. Never permit a hive to be without some disinfectant, and immediately an outbreak is detected get the bees off the combs and into a clean hive, burn the infected combs, and thoroughly disinfect the old hives and put it on one side open to the air for some months. If bees are very weak in numbers burn them as well. If, however, they are strong, so soon as they are off the diseased combs requeen them. This, in my opinion, is an important item. As a means of combating the disease everything should be done to increase the vigour and strength of our bees; failing queens produce low vitality in our stocks. Want of cleanliness and unwholesome food are sure means of producing disease. Finally, always keep a written note of the condition of all stocks for future reference.

Queries and Replies.

[3989.] *Alleged Damage to Cucumbers by Bees.*—Having taken your valuable paper, THE BRITISH BEE JOURNAL, for some years, I should be glad of some information respecting the following:—I have twelve stocks of bees located in a field in a village six miles from Norwich, and within two fields from my bees are the glasshouses of a well-known tomato and cucumber grower, who alleges that owing to the bees getting into the houses his cucumbers grew very badly, and with "blob" or enlarged ends, and were in consequence unfit for market. He has given me notice that he shall put poison about for the bees this spring and summer, and thus destroy them. I am inclined to think this is not caused by the bees at all, but should like your opinion on the matter, also to know what my remedy is?—G. H. S., Norwich, January 8.

REPLY.—The case (either way) is one for the judge before whom the matter came for decision. Nor is it easy to suggest a remedy for damage to cucumbers by bees, or damage to bees by poison, till such damage has been proved. You had better await further developments of the threatened poisoning of your bees before taking action, and then consult a solicitor if the need arises.

[3990.] *Bees Building Comb in Candy-boxes.*—When examining my hives on December 27, to replace empty candy-boxes with full ones, I found the nearly emptied candy-boxes on two hives each filled with a couple of pieces of worked-out comb. Is not this rather unusual at this period of the year? In one nucleus which contains a small lot of bees to winter a queen, I found a small patch of brood ready for sealing. As the weather has been so mild and the bees have been confined for so few days, I concluded it was conducive to early breeding, but as it

is the first time I have known the bees do it so early, I should be pleased to have your opinion.—J. D. W., Wolverhampton.

REPLY.—There is nothing unusual in what the bees have done. In fact, if stocks are strong the bees usually build comb in boxes after consuming the candy.

[3991.] *Keeping Bees near Pigstyës.*—Will you kindly give me a line or two of reply in B.B.J. to the following? 1. I have three hives of bees in my garden which, so far as I know, are healthy, but, as a neighbour of mine is erecting a piggery in his garden, about fifteen yards from the bees, do you think that any offensive smell from same will injure the bees in any way? 2. Is it likely that the bees when disturbed will attack the pigs and so become a nuisance to my neighbour? I could remove the hives to a field half a mile away if forced to do so, which would be more exposed and not so convenient. I enclose name, etc., for reference, and sign myself—ANXIOUS ONE, N.B.

REPLY.—1. There need be no fear of harm to the health of bees from the proximity of pigsty. 2. The last-named position depends largely on the bee-keeper himself. We had a large apiary for nearly twenty-five years with a pigsty within thirty yards of our bees, and never any trouble arose. But anyone who prepares for such things and takes proper precautions may avoid troubles such as you name.

Notices to Correspondents & Inquirers.

(REV.) H. E. (Ashford).—Bees and Candy—1. The habit bees have of building comb in candy-boxes is dealt with in this issue. 2. It by no means follows that bees are not in want of food because of using the candy for comb-building, but simply results from the rise of temperature in the candy-box, along with abundance of food in the latter, and the fact that food and warmth excite the comb-building impulse of the bees.

G. I. H. (Croydon).—Observatory Hives.—We rather doubt your having seen either of the principals of the firm named, or the use of the three grooves mentioned would have been explained to you better than we can on paper, and without having the hive before us. Send us a line on postcard, please, to clear up the point named.

CARBON (Co. Durham).—It is very good of you to take such trouble in preparing finished sketches for the purpose of illustrating your views against the need for slips of wood between outside frames and hive sides where the "W. B. C." metal end is used. But you may take it from us that the trouble feared will not arise. The mere fact of there being thousands of hives in use without any fault-finding on the part of users should be a complete answer to the question asked.

F. JARVIS (North Bucks).—Alterations in Hives and Frames.—While thanking you for sending sketches of the top-bar and arrangement of frames in the hives you prefer, we confess ourselves still unable to see any advantage in occupying space and incurring cost of blocks to illustrate the alleged advantage claimed for a $15\frac{3}{4}$ in. top-bar over the "standard." In the same way, we cannot accept your view that "anyone using a fourteen or fifteen-frame hive would never again use a ten-frame one." We entirely agree that every reader of our journal should be perfectly free to use hives of any shape or capacity he may prefer, but must draw the line at illustrating and encouraging ideas that we consider directly retrograde. With regard to the "Claustral hive and detention chamber," we can only repeat what appears in our footnote on page 514 of B.B.J. of December 28.

G. BLAND (Derbyshire).—Bee-Flowers.—Mr. Geo. Rose, Great Charlotte Street, Liverpool, has a list of bee-flowers kept in stock by himself, which will no doubt be sent on application.

W. H. P. (Bristol).—Faulty Comb Foundation.—The sample sent is extremely soft and, in consequence, is suggestive of adulteration. We should advise you to change your dealer and buy only from a reputable firm, whose goods are of guaranteed quality.

N. J. (Hunts).—Feeding Bees in Skeps.—1. To pour three tablespoonfuls of liquid honey in at the feed-hole of a stocked skep on the 3rd of this month was about as injudicious an act as could be imagined for a bee-man of any experience, especially if, as you say, it was "a sunny day, with all the bees flying freely" in the apiary in question. 2. The mistake was made worse by the fact of there being very few bees flying from the skep, while all the other hives were busy.

F. J. (Mountmellick). — The "Chapman" Honey Plant.—The plant is an annual, and as plenty of seedlings will be found coming up from self-sown seed (as in your case) in gardens where grown, they may be planted out in April for blooming next autumn.

****** Some Queries and Replies, &c., are unavoidably held over till next week.***

Editorial, Notices, &c.

DEVON BEEKEEPERS' ASSOCIATION.

ANNUAL MEETING.

The eighth annual general meeting was held at Exeter on the 12th inst., the chair being taken by Col. Walker. Amongst those present were:—Miss Pittis, Messrs. Burgess, Farrant, Furse, Godsland, Goss, Parrish, Shoemack, Smith, Squire, and Scholefield.

The report and balance sheet were adopted.

The report showed that during the past twelve months seventy-three members had joined the Association, thirty-three had resigned, and seventy-one had been struck off as in default with their subscriptions, so that the present strength was 330, against 361 at the end of 1904. It should be stated, however, that under recent decision of the Council thirty-five of these defaulters were struck off in the current year instead of being carried forward as on the strength, otherwise there would have been a gain of four members to report. The accounts showed a small balance to credit.

The second entire visitation of the county by certificated experts employed under the County Council grant was completed last spring, the tour starting on the 17th April, and the entire time paid for being exactly nineteen weeks. On comparing the results of these two visitations, the information as given by the experts employed showed that while the number of the apiaries actually inspected in each is almost identical, 7,279 in 1904-5, 6,714 in 1902-3, the number of straw skeps have decreased by forty-three, and frame hives have increased by 608, to a total of 4,032.

The number of apiaries infected with foul brood has slightly increased, amounting now to 18.1 per cent., against 16.2 per cent. It should be remembered that the half of Devon visited in 1904 could not be revisited in the tour of 1905, which was designed to complete the visitation of the county, so that the possible effects of the tour of 1904 in diminishing foul brood are not to be gathered from the results of the information obtained from the experts. But in any case, the general result bears out the view maintained for some years past by the Council that nothing short of compulsory powers of destruction in pronounced cases of disease will ever be effectual. In consequence of the withholding of the County Council grant, a resolution was passed that only those members subscribing 5s. or upwards should be entitled to a free visit from an expert.

The president and vice-presidents were re-elected, and the Council formed for the year, Mr. F. P. Smith being elected hon. treasurer, and Mr. A. S. Parrish hon. secretary.

A vote of thanks to the Mayor of Exeter for kindly allowing the Association the use of the Guildhall for their meetings, to Mr. Boundy for auditing the accounts, and to the chairman, Col. Walker, concluded the business of the meeting.

WORCESTERSHIRE B.K.A.

ANNUAL MEETING.

The annual meeting was held at the Shire Hall, Worcester, on January 13, but there was a very small attendance, owing to the state of the atmosphere (political) probably. The Rev. J. Bowstead Wilson was in the chair, and there were present Miss A. Z. Hunt, Dr. E. Walpole Simmons, Messrs. J. S. Bailey, F. W. Barnard, G. Bracken, J. T. Brierley, H. Brooks, E. Corbett, W. H. Hooper, E. A. Millward, A. R. Moreton, J. P. Phillips, J. Price, and others. The report of the committee, and that of the treasurer, which showed a balance in hand of about £13, was passed.

The Earl of Coventry was re-elected President, and the Vice-Presidents were re-elected, with the addition of Earl Beauchamp, Lord Sandys, and Mr. Richard Cadbury. The various officers were re-appointed, and Messrs. Bracken and Brierley added to the committee in place of two members who resigned. It was resolved to form a library of works on bees and bee-keeping for the use of members, details being left to the committee. The third-class expert certificate was presented to Mr. J. S. Bailey, but the members who had gained the medals and three other certificates were unable to be present. A grant of £1 was made to the fund for the expenses of Mr. G. P. Saunders in endeavouring to obtain legislation for the prevention of foul brood.—JOHN P. PHILLIPS, Hon. Sec. W.B.K.A., Spetchley, January 15.

Correspondence.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

NOTES BY THE WAY.

[6169.] The weather keeps mild and open, but a heavy rainfall since the new year came in will add to our stores of water and relieve stockmasters of a considerable expense in carting water in some districts. A few bees have been on the

wing whenever tempted out by the sunshine, and I have noticed a few visiting the watering-places; this points to early breeding.

After the late heavy rains, do not forget to see to condition of quilts and wraps inside hives; this is important for the well-being of the stock, as we may get a long spell of cold, frosty weather, and then the wraps would be frozen into covers of icy coldness, under which the colony, unless a strong one, may perish. The wet wraps must be replaced by dry ones, and a cake of candy may be given any day when the bees are flying if extra food is required; but stocks that are well supplied and housed in dry hives are best left alone for some time to come. Any constructive work that bee-keepers intend doing now ready for the coming season should be pushed on with especially by those among us who have large gardens to attend to, and only the hours after ordinary labour is over in which to do their bee-work. Those also who intend to try some of the newest style of hives, or are in need of other bee-goods, should place their orders at once, so that the maker may be able to fill in some of his slack time, instead of waiting till the busy days when things are wanted for immediate use, and then possibly be disappointed at the non-delivery. The same truism applies all along the line, "Be ready!" Order early, and thus help the manufacturer and yourself. Those who run their apiaries for extracted honey, and jar it off for their customers as required from granulated stock, should be very careful when reliquefying it not to overheat the honey, or the flavour will be spoiled, and possibly trade lost in the future. A good plan is to put the tin containing the honey into a larger one, with water up to equal height outside the tin to that of the honey being melted, then gradually heat it altogether, and as soon as the honey becomes warm and liquid around the sides of the tin it should be stirred with a strong spatula, so that the whole of the contents can be put into the jars before the honey becomes quite clear. This will meet the wants of customers who prefer their honey crystallised, as it will soon return to the latter condition, perhaps not quite so solid as before. If clear liquid honey is wanted, continue the warming gradually, constantly moving the bulk so that all is of about equal temperature. Do not raise the temperature of the honey above 130 deg., or the aroma will be lost.

Your correspondent, Mr. Huxley, still keeps pegging away for the G.W.R., nor have I any objection to Mr. H. quoting rates per ton, but I am amused at the futility of his so doing. I still contend that honey at *owner's risk* per goods train should not be charged at the same rate as other goods for which the company is responsible for damage. If I have to bear the loss by damage, why should it not be carried as cheap as other goods at owner's risk, even if other goods consist of scrap iron? The exhibits thrown about at the junction I mentioned were so well packed that they received no damage. Our friend is labouring under a mistake in saying that I failed to press for my just due. I make no false claims. The claims I have made in the past were before the railway companies combined to discontinue their responsibility for damage, so "J. H." fails on that point.—W. Woodley, Beedon, Newbury.

[We will be glad if the discussion on the above is now allowed to close.—Eds.]

THE INSTINCT OF SELF-SACRIFICE IN APIS MELLIFICA.

[6170.] Recently, in the journal of the Alsace-Lorraine Bee-keepers' Association, there was an account of an experiment made by Dr. Büttel-Reepen, a well-known German scientific writer on bee matters, which was designed to test the often reported devotion to their queen displayed, under circumstances of sore trial, by the workers of the hive. The queen with about a hundred attendants were confined in a box suitable for observation and containing but little food. In forty-eight hours signs of feebleness were apparent. Two days later all but four of the workers had died, the queen being still vigorous. Soon only one worker was left alive, and she, though no longer able to stand up, was seen trying to bestow a last droplet of honey on the queen, who came to her begging to be fed. An hour later the worker had perished, and the mother bee was still walking briskly to and fro. A piteous tale: let us hope that the doctor's scientific curiosity is satisfied.

Few of Nature's mysteries can be more interesting than the evolution of the honey-bee. Wonderful that a solitary insect content with one or two round honey-pots should become master of an architecture at once symmetrical and adapted to any situation. Marvellous that the simple instinct of self-preservation common to all creation should, in the interest of the community, receive so varied a development, and that, curiously intensified in the person of the queen, in the worker it should have been so far diverted into another channel as to present in certain cases the appearance of self-sacrifice.

The least observant of bee-keepers must have noticed how careful of her own safety is the mother bee, and how unwillingly she leaves the shelter of the combs. Gifted with efficient stinging powers she cannot be induced to run the risk of using them

except for urgent domestic reasons. Nay, more, Huber reported several instances of rival queens struggling for advantage in combat having hastily separated when their position appeared to involve mutual destruction. On the other hand, although not only species, but, on close observation, individuals will be found to vary in disposition, or what one is tempted to term mental and moral characteristics, the worker bee can never be accused of wanting courage. Apart from such instances of devotion as that recorded above, she readily risks her life for the public benefit. Yet we should err, if, with our forefathers, we were to attribute to her a sentiment of filial devotion, seeing that throughout the animal world, even where in early days the progeny has been dependent upon the parent for sustenance, there is no reason to believe that such a feeling, if indeed it ever existed, outlasts the period of dependency. The desire to preserve the mother bee must be purely instinctive.

Let us look a little further into the question of self-sacrifice. How does the worker's life end? Obviously the mortality of the hive is very great, though little noticed by the bee-keeper, who knows that however many may die, the population will not fail. He can only tell you that of the vast number who disappear, very few die inside the hive, and that sooner than remain as an offence, the maimed and decrepid will struggle forth and fall helpless to the ground. What becomes of all the others that vanish? In the year 1880, a letter from Mr. J. A. Luby, C.E., was published in the Proceedings of the Royal Dublin Society, in which he sought to show that not only does "self-expatriation and (self) casting forth to die when they become aware that their days are numbered," obtain at all times amongst workers, but that the act is "shared in by the young, and able, as well as the old and decrepid." I will try to explain how Mr. Luby arrived at this conclusion, with which, after having long borne the matter in mind, I agree.

He had noticed from time to time ragged, old-looking workers, laden with pollen, who, after once or twice, missing the alighting board, rose up, and without more ado, sailed straight away on a heavy-winged flight, and in these instances he convinced himself that the bee did not return. This led him to make experiments in winter. In the autumn of 1876 he had thirteen strong colonies in straw hives. Of these he brought eight into a room which had no fireplace, but was otherwise kept at a moderate even temperature, and placed each of them over an empty wine case, provided with shuttered observation panes at the ends, and a door with perforated zinc slide, the hive itself standing on a loose board, in which a hole had been made to match its interior diameter. In various ways all but two hives were kept in complete darkness: the latter stood opposite to the window in a N.-W. light. In the darkened hives complete quiet obtained throughout the winter, except when "an occasional hollow tap" was heard on the floor of the box, caused by the fall of a dead bee from the combs. In the other two a bee occasionally left the cluster and flew round and round the case, trying every cranny for exit, and although in its gyrations it would sometimes strike the bottom of the cluster, *it never rejoined it*, but in the end died on the floor. To test the intentions of these bees the room window was opened and the zinc slides of the case removed, when, in every case although in a strange locality, the bee flew straight away over the housetops and never returned, nor did it seek the old stand where, so as to test this point, hives had been placed. The smallest streak of light was found sufficient to keep up this occasional departure; on the other hand, when hives were aroused by extra light or by tapping several bees would issue, and these did betake themselves to the old stand.

Of the hives left outside two were provided with boxes, and the others had zinc slides to their usual entrances, which were closed except in fine weather. The general result was precisely as indoors. It was also noticed that the bees that died, unable to get out, were old and had filled themselves with honey. "I did not find," writes Mr. Luby, "that cold weather, so long as it was dry, restrained the bees from coming forth, or trying to, in the manner I have described. Now it is well known that bees, when they come out of their hive in winter time for amusement or sanitary purposes, never go far from the hive; they content themselves with wheeling about and darting hither and thither in the immediate vicinity. But what did these bees mean by darting away, high in the air at top speed, straight as an arrow's flight; with perchance the thermometer standing at about zero?"

"I need not detail how I now closed all these four hives simultaneously on a bee issuing or being let forth, now opened one and closed the rest, etc, etc. The result was the same in all cases, these bees never returned. I may say that I always chose a day for observation that was not fine enough to tempt bees out, but that yet was dry.

"I will end by detailing the different mode in which the bee that gets out freely (doors being open) acts, from one that is detained inside for some minutes ere it is let forth. The latter, on being liberated,

behaves like the bees I have mentioned in the case of the hives exposed to the light inside the house—simply darting off without one look behind—the former, on the other hand, runs down the flight board, starts quietly off it gives one turn round the front of the hive as if to take a last look, the next wheel begins a drawn-out spiral, taking a half-turn, of which it attains a tolerably high elevation over the hive. With the commencement of this turn upwards, the bee begins a peculiar moaning sort of hum, quite unlike any ordinary sound, it increases to a roar, and as the bee, now having attained sufficient elevation, sails away in a straight, steady, laden-looking flight, it can be heard for a considerable distance.

"Over the treetops it has vanished. Shut the doors! Does it come back? No! It has gone to seek 'the happy hunting grounds.'"

So far Mr. Luby of the worker. What of the drone? Sauntering through the little span that Nature has made so smooth for him, he lives well, keeps himself strong and lusty, and if fate so decree dies in brief matrimonial ecstasy. No hero he; yet on occasion you shall find him cut the thread of life as resolutely as his Amazonian sister.

It was the close of September. The nights had grown cool; serious bee-work was at an end · and in my observatory hive for the last two days the merry game of drone-baiting had been at full swing. Towards evening I went to the library to have a last look round. The bees had drawn within; all but one outcast drone who stood in the glass-covered passage leading to the window, chilled and motionless. In sorrow for my sex, I came to his rescue, and having warmed him into full vigour between my hands, put him back and watched, wondering what he would do. On one hand the cosy well-stored combs; on the other chilly autumn night. Would he creep in?

A moment's hesitation. Then the drone, mindful, as I like to think, of intolerable indignities, turned to the window, and bustling forth with manly hum was lost in the darkening sky.—H. J. O. WALKER (Lt.-Col.).

SUBDUING VICIOUS BEES.

[6171.] Referring to the article by "D. M. M." in your issue of December 28 (page 511) on "Vicious Bees," let me say if any reader would like to try the remedy advised for dealing with them—i.e., using old propolised quilts for smoker's fuel—let me say, be careful. One afternoon in June last year I had occasion to manipulate some half-dozen of my hives, and went about the task as usual, charging my smoker with brown paper and rotten wood. When all was finished I had just time to fulfil a promise to put a super on a hive for a widow in our village, but on looking at my smoker I found the fuel nearly exhausted, and, having no more at hand, I tore off a few scraps of a disused quilt, and as a trial put these in the smoker before starting on my errand. There was propolis only one one side of the quilt used, with perhaps the remains of a brace comb. My neighbour's place was only two minutes' walk from my own hives, and when I got there the smoker was well alight. I had a look first to see how the brood-chamber of the hive in question fared. I had moved about half the combs when suddenly something went wrong with the bees. I used more smoke in an attempt to quieten them, then more still, but the more smoke I used the more unmanageable they became. Suddenly I noticed the strong smell of the burning propolis, and as the viciousness increased I dropped the smoker hurriedly, set the frames in order as best I could, put on the super, covered up and decamped as fast as my legs would carry me. It seemed as if the smell of the burning propolis infuriated the bees, and made them quite beyond control.

No doubt it would often be convenient to use old quilts in this way, as they are generally handy just when wanted; but before doing it again I should like to have the experience of some other bee-keepers who have tried this material for subduing vicious bees.—J. G., Cranbrook, Kent.

RAILWAY RATES FOR HONEY.

A SATISFACTORY SEQUEL.

[6172.] I write to thank you for kindly inserting my letter on December 20, 1905, re the high railway rates for honey. To-day I satisfied myself that there is, as our friend J. Huxley suggests, a lower scale of rates for the carriage of honey on the S.E. and C. Railway, and beg to thank him for his advice. Although the railway official did not inform me of these charges when the honey was despatched, he "comforted" me afterwards by saying that the company had charged me on the "highest scale," and that their share (to London) was only 8d.

The above instance (which I shall bear in mind in future) proves the usefulness of your valuable journal for the mutual benefit of its bee-keeping readers. To conclude, let me wish Mr. H. and yourselves, Messrs. Editors, all prosperity in the new year and coming bee season, and, although these greetings are somewhat belated, they are no less sincere.—GEO. F. SANDERS.

(*Correspondence continued on page* 26.)

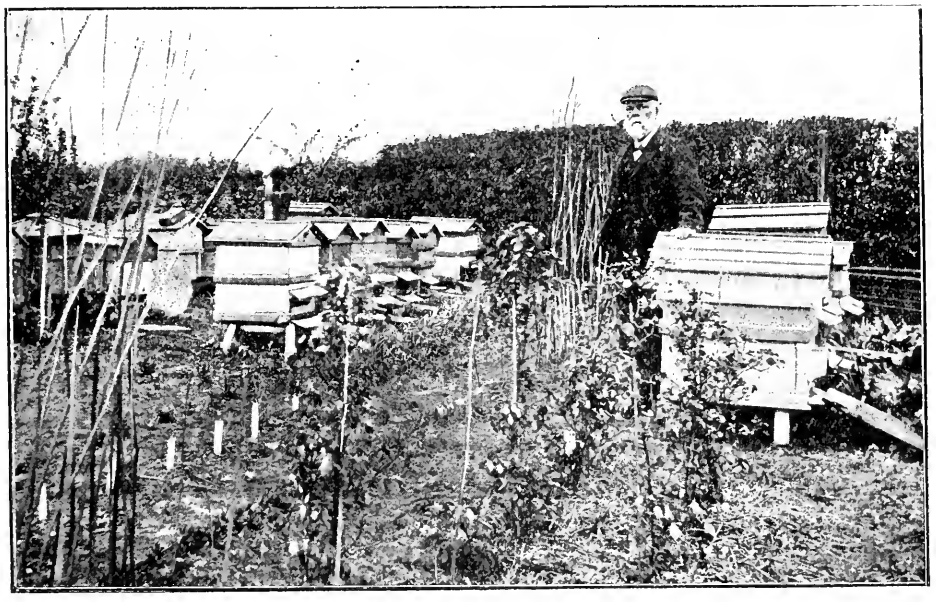
HOMES OF THE HONEY BEE.

THE APIARIES OF OUR READERS.

We are very pleased to illustrate below the neatly-kept bee-garden (along with himself) of so worthy and valuable a helper in the cause we serve as our friend, Mr. Mackinder. The modest account, given by himself, of his labours on behalf of the bee industry needs no addition from us, except to express a hope that he may be long spared to make "converts," who will, like the others, prove good and useful recruits to the craft. He says:—

"As requested, I will try and give a few details of my bee-keeping, about which much might be written, as my early experience harks back to the seventies. My interest in the craft was first thoroughly awakened at a village flower show, when a lecture and demonstration with bees was given by Mr. Tom Sells. I was so astonished by the way the bees were driven and handled by the lecturer that I determined to go home and try to do likewise. An old skeppist in the village where I then lived (only seven miles from my present home) promised me his bees instead of resorting to the sulphur pit, and within a month of seeing it done, I successfully drove my first skep. Meantime I had purchased a frame hive, into which I put the bees, thus starting my new-found hobby, and my fondness for it is just as strong with me to-day. (I might here say that the old man mentioned above also took to the bar-frame hives in preference to his skeps.) But, alas! my first lot of bees soon died from exposure, through constantly opening the hive. I determined, however, to start again, and in the following spring purchased a strong skep, and transferred them to the frame hive, from which I obtained my first honey, and from that time my stock increased rapidly till I had got half a dozen hives, which was as many as my small garden would accommodate. Up to this time I knew nothing of bee associations or of a bee journal, so I advertised bees for sale in a Notts paper, and Mr. A. G. Pugh, Hon. Sec. to the N.B.K.A. at that time answered my advertisement, not to buy bees, but to invite me to become a member of the association. Eventually Mr. Pugh paid me a visit, and gave me some useful instruction that I have never forgotten. He also induced me to join the association, and for many years I have acted as district secretary. During that time I have made many converts to the craft, some of whom have become experts; one of them, I am proud to say, now holds the first class certificate of the B.B.K.A., and is one of the foremost experts of the day. I refer to Mr. Wm. Herrod, who when reading these lines will no doubt remember his first lesson. I have not aspired to a certificate myself, but have a son who holds a third class.

"With regard to my success as a honey producer, I have never been favoured in Notts with large takes of surplus. I work mainly for extracted honey, and this year in the medium or dark class, at our annual



MR. R. MACKINDER'S APIARY, NEWARK, NOTTINGHAMSHIRE.

show held at Southwell I took first prize. The number of hives in the accompanying photo. is fourteen, but sometimes I have twenty or twenty five. I am frequently starting fresh recruits in the pursuit, and this season I have supplied four gentlemen of position with six stocks complete, three of which yielded good results. I still take our old friend the B.B.J. every week, and should not like to be without it."

CORRESPONDENCE.

(*Continued from page* 24.)

BEE NOTES FROM ESSEX.

[6173.] *Bee Paralysis.*—The article dealing with paralysis in bees, B.B.J., January 4 (page 7), is very interesting, and should be useful to British bee-keepers at home, for although the conditions in Australia differ greatly from those prevailing in England, there should be no difference in the results when applying a remedy for the purpose of curing bees of this disease. For myself, I may say that during my twenty-five years bee-keeping, I can only remember having had two bad cases of paralysis in my apiary, and in each of these the symptoms are correctly given in the paper referred to above.

An Australian bee-keeper (a native of this parish), who was over here holiday making a few years back, told me that the class of bee-keepers out there corresponding with our skeppists simply get a used grocer's packing box when honey is wanted, turn up the box already occupied by bees, drum the latter out, and leave them to establish themselves in the empty box. This the driven bees are usually able to do, honey being obtainable in varying quantities in the different seasons of the year.

The Standard Frame.—I note that the Council of the B.B.K.A. are considering the desirability of improving the "standard" frame. No doubt a real need of change must be proved before making any alteration, and if practical experience is of any value, I have handled some thousands of these frames, and have only seen five or six that had dropped, or sagged, in the centre through weakness. Not only so, but where it occurred, the weakness was due to a defect in the wood. At the same time, I am in favour of a wider top-bar, preferring a frame 1 1-16th inch wide, with the bottom bar $\frac{7}{8}$ inch narrower; this I find is a more useful and stronger frame, and any addition to the thickness of the present standard bar is quite unnecessary. The saw-cut in the top bar is almost a necessity to the bee-keeper who is in a hurry, but I think that preference should be given to a bar that is grooved only. I say this, because, although a grooved bar has the one disadvantage at the start, faults of various kinds are continually asserting themselves in connection with the saw-cut, such as harbouring wax-moth, brace-combs attached to supers, and still more often, weakness caused by splitting the bar, etc. With regard to the width of the 1lb. sections, my experience of these is that the 1 15-16th inch wide is the correct size. In 1904 I had a dozen of the 2-inch width, averaging considerably over 1lb. each, some of them weighing nineteen, eighteen and a half ounces, and so on.—W. Loveday, Hatfield Heath, Harlow.

DAMAGE TO CUCUMBERS BY BEES.

[6174.] With regard to the damage to cucumbers, and the threatened consequences from same, I think it possible that a little information may perhaps dissipate the trouble of your correspondent, "G. H. S." (3989, page 19), and also the cucumber grower whose produce is injured by the bees. May I, therefore, be allowed to say: The cucumber is a dicecious plant —i.e., one that bears male and female organs on different flowers, and bees, in collecting pollen, visit both kinds, and in doing this the female flowers are fertilised and bear seed. It is well known that this is going on throughout all nature, but in this particular case the market-man does not want seed (seed-growing is a special line), but good, straight cucumbers, and the fertilisation spoils them. The remedy is easy, and is adopted by all advanced growers. He should shade his houses, not open the ventilators or leave his doors open, and his trouble is ended. But if he puts poison about, "G. H. S." need have no fear for his bees, as he will find them "not taking any."—Geo. Wall, Wealdstone, January 13.

BEE NOTES FROM WORCESTERSHIRE

[6175.] When entering my garden on the morning of Thursday last it made one almost wonder if it was really the first week of January or a warm day in April, for, what with the warmth, the bright sunshine, and the merry hum of the bees overhead, it was more like summer than winter. From every hive the bees were out in large numbers, simply revelling in the opportunity afforded them for an airing flight. A bee-keeper friend who called told me he had seen numerous bees buzzing past him out in the fields a mile at least from any apiary busily exploring the district in search of bee-forage plants. Should you not call this a good district for bee-keeping, seeing that I am situated in the midst of

fruit orchards and flower-gardening neighbourhood, with acres of wallflowers, etc., yielding early pollen in abundance, followed by the plentiful bloom in large plantations of fruit trees. There are also fields of beans and a few acres of sainfoin three-quarters of a mile away. Seeing that in addition a fair amount of white clover is grown in the fields and on roadsides, I think it might be classed an ideal bee-district from a beginner's point of view, and I may fairly class myself as such, having only started with frame-hives in 1904 without any previous knowledge whatever of their management. The year 1905, however, found me possessed of a "Guide Book" (Cowan's, of course), which book I regard as a great boon to every beginner in bee-keeping. With its help I determined to get my bees on to standard frames in proper hives, and I now have seven stocks, four of which were put straight last year; the other three will be dealt with in the same way during the current season.

I had a very poor take of surplus-honey last year, no doubt owing to the bees being pulled about to get them into proper workable form, as they should be. My largest "take" was about 40 lb. from one hive, while from the other five I only got 30 lb. from the lot. Thanking you very much for advice given me through the B.B.J. in the past year, and wishing success to you and all bee-keepers for 1906, I send name, etc., and sign BEES, Badsey, Evesham.

[We should call yours a capital bee district.—EDS.]

THE BEE-KEEPING EXPERIENCES OF TWO YOUNG BEE-KEEPERS.

[6176.] The following is a short account of our bee-keeping experiences, which we thought might interest other young bee-keepers, if you think it suitable for inserting in the B. B. J.

Since the mature age of six or seven we have both had a great love for bees; though we had never seen a bee hive except in pictures. From that time one of our chief objects in life was to be the proud possessors of a colony of bees; and in order to attain this end we dedicated our small plots of garden to the growing of vegetables, etc., which we sold to mother. Probably our youthful business methods were not very good, for we did not get our first hive till (in 1903) we were about 14 or 15. Since then the number of our hives has increased to four, and our interest in them is always growing keener.

During the first year we left the bees almost entirely to themselves, having a natural dread of stings, but took seventeen sections of comb-honey from our one colony. In the meantime we had been learning how to manage them from the British Beekeeper's Guide Book; and in the spring of 1904 we tried to make an artificial swarm; but failed to raise a queen for the old stock, owing to bad weather. We had been deceived by the fine weather in the early part of May, and the supposed great number of bees in the hive; so we got a weak swarm, and also greatly weakened the strength of the parent stock. However, in June we bought another lot, and so finished 1904 with three stocks, but not much honey. Our failure was probably largely due to the fact that we opened the hive and examined the bees too often, our first dread of them having worn off.

In the spring of last year we started with three strong stocks. One especially gave promise of great things, and by the end of May we had two supers on it. In June, however, we went from home for about five weeks, and while we were away this stock swarmed. The swarm was successfully hived by the gardener, but, alas! our hopes were blighted so far as securing a large take of honey. Up to then we had been trying to prevent swarming in all stocks by removing queen-cells, etc. However, from the original three stocks we averaged about thirty pounds per hive. Considering our proximity to the city and our being away during the chief honey-flow, we thought this fairly good.

Last autumn we had another disappointment, when one stock developed foul brood. It was rather a slight case, so we tried to make an artificial swarm, according to directions in the "Guide Book," but when we opened the skep to introduce the bees to the clean hive, we found them all dead. This was probably because we did not cover the skep to protect it from the wet. We also lost about thirty pounds of honey when burning the combs, etc. We are glad to say our three stocks all seem healthy and promise well for getting through the winter safely.

All our bees are hybrids, and last autumn the strongest stock was very vicious; indeed, we nearly always got stung when manipulating the hive, but hope they will be more docile next season, as neither apifuge nor smoke seemed to pacify them at all. We thought they must be queenless, but on examination found plenty of eggs and brood in the combs. By the way, one of our great difficulties has been to find the queen when wanted.

The bees are fed both in autumn and spring, and, so far, we have had no winter losses. The hives are also cleaned and painted each spring.

We always had some difficulty in making good bee-candy, but lately have succeeded much better by using more water, as in Brother Colomban's recipe, and boiling till the temperature is about 230 deg.

to 235 deg. Fahr. This seems a fairly exact method of finding when the candy is done. We follow the "Guide Book" recipe in all other particulars.

As readers of the B.B.J. since the beginning of 1904, we find it a very great help, but seeing that we have no bee-keeping friends near, we had to learn a good deal by rather bitter experience—which, after all, is the best way.

Our chief sources of honey are clover, lime, and chestnut; but the fruit trees are also useful for building up stocks in the spring. We have not, however, succeeded in getting the bees far enough forward to obtain any super-honey from early sources up to now. Our first honey last year was from the chestnuts.

Last autumn we made a fixed cage extractor and a ripener, so next year we intend to work partly for extracted honey. Our honey is much sought after and seems to be of good quality. It is our intention to increase our stocks to about seven. This will be as much as we can manage in the time we have to spare from college work.

Wishing the B.B.J. and all bee-keepers a prosperous season in 1906.—SARAH M. and G. RALPH BAKER, London, N.W.

A BEGINNER'S FIRST REPORT.

[6177.] I am only a beginner with bees, having started with one hive in March, 1905, and I thought you might be pleased to know that it has yielded me 52 lb. of surplus honey. I consider this a very good harvest for a novice, especially when compared with my less fortunate neighbour, who owns about a dozen hives, and tells me they have done very badly last year. I have the "Guide Book," and also take the B.B.J., which I look forward to with pleasure each week, always gaining knowledge from the experiences of others as given therein.—T. A. B., Awsworth, Notts.

DECEMBER RAINFALL.

Total fall, .98 in.
Heaviest fall in 24 hours, .30 in., on 7th.
Rain fell on seventeen days.

W. HEAD, Brilley, Herefordshire.

HONEY IMPORTS.

The value of honey imported into the United Kingdom during the month of December, 1905, was £1,636.—From a return furnished to the BRITISH BEE JOURNAL by the Statistical Office, H.M. Customs.

AMERICAN AND COLONIAL PAPERS.

EXTRACTS AND COMMENTS.

By D. M. MACDONALD, Banff.

From Texas.—The Convention proceedings have been interesting. Shallow-frames are in great favour for surplus storing, and all who have tried them continue to use them. They believe in strong colonies for comb-honey production. The system followed by the leading men seems to be as follows:—Two full-depth hive bodies are used for the brood-chamber, but when the honey-flow sets in all the hatching-brood is crowded into the lower body-box, and supers are put on. Being so strong, the bees take possession at once, and when the honey-rush engages their attention there is no danger of swarming. When confining bees to a single chamber it will be seen that some combs of brood will be left over. These are utilised to make increase where desired. In their favourable climate this is easily done. When the upper body is removed some brood and bees are left in it, a cover is put on, and all laid on a bottom-board. A ripe queen-cell is given, and this newly-made colony is put away on a new stand, soon to work up into a strong lot in that bee paradise. The parent colony being one mass of hatching-brood, with a powerful force of field bees, rolls in the honey at an amazing rate with good weather and a full flow on. They work mainly for bulk comb-honey, which, I take it, means selling it in the shallow-frames as "chunk" honey. In the latter form it is popular in many parts of the States. Each comb is packed in paraffin paper, and then placed in cans. Sometimes the can is filled up with extracted, and the mixture sells well.

Cars or Carts.—The "P. D." must accept the credit of mixing the tea with the seventy cars loads of honey. When I quote I quote accurately.

Blacks.—I notice that in Belgium, Switzerland, France, and Germany bee-papers are now lauding their old love. Where change is desiderated it is more in the form of improving the blacks than in the introduction of new races that perfection is now being generally sought. And that is well.

Starters Only.—"When hiving a swarm Gravenhorst gives only a few frames, and those with starters only, about what the swarm will build of worker-comb. After these are nearly full, and when drone-comb would likely be commenced, he completes the brood-nest with full sheets of foundation." This, which is a common practice with us, is an excellent one. It tends to economy in foundation, and so saves outlay, while in a good flow the brood-nest is built out, I really think, as quickly as when full sheets are supplied. Combs are generally perfectly interchangeable, and all worker-cells.

The Flight of the Bee.—A query appears in *Gleanings*, page 1,088: "There are many basswood trees within three and a half miles of my yard. Are they within range?" To which the editor gives this reply: "The distance of three and a half miles from basswood would be somewhat beyond the range of ordinary bee-flight. Your better way would be to move a small outyard to the basswoods." I quite endorse the editor's reply, and set it down as good, sound sense. Yet this is the very honey source Mr. Doolittle not long ago told us bees travelled eight miles to work on, not from mere choice, but preference. Several points coming under my observation, and information forwarded me this season, lead me to narrow still further my conception of the area covered by the bees of any particular apiary by choice. Very rarely do they forage more than two miles from home, if a honey source is within this range. And yet here is Mr. Alexander in the last issue of *Gleanings* asserting that they go five miles to work on buckwheat; while Mr. Root corroborates the statement.

A New Wax-extractor.—The Associate Editor of the *American Bee-keeper* has let fall hints for some time back that he had ideas simmering in his brain which, when they would materialise, would evolve a machine approaching the acme of perfection. He has now given it to the world through the Falconer Company. It is mainly on the old lines, with an adaptation of the inner mechanism of the newest German model I lately described, which, by windmill paddles, stirs the mass in order to liberate the wax from the cocoons and other foreign matter. The new part is simply a conical cover, with a spout through which the wax flows out near the top. Hot water is added through the funnel on the cover, and as soon as the fluids reach the apex of the cone the wax begins to flow out. The crank is then turned for a few minutes, more water added, and more wax pours out until all is rendered. He claims that his invention marks a new era in wax-production, and its use should greatly increase the wax output of the country. Mr. Miller's sanguine estimate may not be fully realised; but, although not wholly sharing a parent's fond estimate of the latest child of his brain, I consider his ideas are good and likely to bear fruit. We are certain to hear more about this subject, as it was down for discussion at the late Conference at Chicago.

The National.—The result of the election of office-bearers is as follows:—President, Mr. C. P. Dadant; Vice-President, Mr. George E. Hilton; Secretary, Mr. W. Z. Hutchinson; General Manager, Mr. N. E. France; Directors, Messrs. F. Wilcox, C. A. Hatch, and E. R. Root. All are prominent in the bee world. Excellent photographs are reproduced by Mr. York in the *American Bee Journal*.

One or More Bee Papers.—Any one who keeps bees in any number should not be content with one, or even two, bee papers. The largest bee-keeper in the world, W. L. Coggshall, says: "I cannot afford *not* to take all the bee papers published in the United States, and, moreover, I cannot afford not to scan every page after they come to hand." I read a round dozen, and rarely miss a single paragraph of any one of them. In every issue I get new matter well worth the price of paper. My opinion is that no investment in bee-keeping pays better than the money spent in bee literature. Several good text-books are indispensable, and two or more bee papers are equally so.

Queries and Replies.

[3192.] *Suspected Dysentery.*—A few weeks ago I noticed that the bees of one of my hives, when they came out for a fly on fine days, relieved themselves of a brown, or yellowish, substance while on the wing. But the other day, while my other two stocks were flying freely in the sunshine, not a bee was seen at the first-named hive. I therefore made an examination, and immediately saw that the bees were all dead. On removing the frames, I found about 20lb. of food stored in them, and that a few of the combs had begun to get a bit mouldy from the damp. I now wish to know if these frames of food may be given to my other stocks without danger to the latter? I do not wish to waste so much food if it can be avoided; and if all right, when would be the best time to give it to the bees? I might extract the food from combs and keep it in jars for spring use, if you advise that course. Your reply will much oblige.—C. W., West Bromwich.

REPLY.—If you are quite sure that there is no sign of disease in the combs, the food might either be given to the bees as it is in spring, or extract contents and give it in jars, as proposed.

[3193.] *Painting Hives in Different Colours.*—Many thanks for your reply in B.B.J. of December 21 (page 509), as to the height of the entrance to hives. Will you now kindly allow me to ask, Is it any help to the bee to paint hives of different colours? I have kept bees, and studied most of the books about them, for a year and a half, and I think that the bee knows its own home from position only, and that the colour of the hive is of no importance.

I bought four good stocks in old hives last spring—each very strong in bees—from the widow of a very successful bee-keeper, at two guineas each, and I do not regret the bargain. The hives were placed in a line, about 4ft. apart. There is nothing as to colour to distinguish one hive from the other, yet there has been no confusion, and the bees have worked well, and given us a good surplus of honey. I have now nearly finished four new hives for these bees, and before transferring them into the latter, I should be very gratified to have your advice as to painting them in different colours.—"NOVICE," Loughborough.

REPLY.—No doubt there is a certain amount of risk to young queens through mistaking their hive and entering the wrong one on returning from the marital flight, when all hives are painted of the same colour; this is especially the case when they are perforce placed close together. But when room is not limited and the hives stand two or three yards apart we should have no fear on this head, and, to our mind, it certainly adds to the general appearance of a bee-garden when a uniform colour of light, sober tint is adopted.

Echoes from the Hives.

Seaview Road, Gillingham, Kent, January 7.—I heard a blackbird or a thrush singing for about forty-five minutes this morning. Is this the first? Snowdrops and winter aconites are showing bloom, and bees flying well. This is a foretaste of good times to come, so we must look ahead now!—"DEBORAH."

Notices to Correspondents & Inquirers.

Letters or queries asking for addresses of manufacturers or correspondents, or where appliances can be purchased, or replies giving such information, can only be inserted as advertisements. The space devoted to letters, queries, and replies is meant for the general good of bee-keepers, and not for advertisements. We wish our correspondents to bear in mind that, as it is necessary for us to go to press in advance of the date of issue, queries cannot always be replied to in the issue immediately following the receipt of their communications.

G. S. (Doncaster). — Buying Honey from Advertisers.—The letter you quote as being written by the seller referred to makes no mention of the sample sent being English honey; therefore, it is not easy to say what legal remedy you have. On the other hand, the particulars given with regard to honey reaching you "Ex East India Dock," in half cwt. tins stamped on the top "Oil," and also "bearing no evidence of having been opened for several months," affords strong presumptive evidence that the contents were not produced in this country; and that is our own impression, after inspecting your sample. It is also very probable that the seller would not dispute the point if the occasion arose. Yours is not by any means the first query which has reached us on this subject, and we have more than once urged honey buyers to require a guarantee from advertisers when only English honey is asked for and expected.

R. MILLER (Bridge of Allan).—Honey for Feeding Bees.—The sample sent is almost entirely honey dew, and if used only for spring feeding we should expect no bad effect on the bees to follow. As it was gathered so long ago as 1904, we presume the honey has been relique fied after granulation, and there are no signs of fermentation about it.

D. MCKENZIE (Beauly, N.B.).—A Beginner's Queries.—As you are only contemplating a start with bees, and have, so far, no knowledge whatever of their habits or management, the best advice we can offer is to purchase a reliable and up-to-date text book on the subject and study its contents. By so doing you will save time, trouble, and money; not only so, but your aptitude for the craft will get a chance of asserting itself, which it would not have if you sought all your instruction in our Query and Reply column. We may, however, answer your first query by saying there is no use whatever in your buying one stock each of the various kinds of bees mentioned, and hoping to keep each kind pure. They would be all mixed up so far as breeds soon after the first season was over. The books we advise are the "Bee-keepers' Guide Book," 1s. 8d. post free, or "Modern Bee-keeping," a handbook for cottagers, 7d. post free, either of which may be had from this office.

A. J. R. (Uckfield). — Railway Rates for Honey.—We are much obliged for your long letter, but as we find therein no new light thrown on the subject, it is hardly worth while occupying space with personal matters not of general interest to readers.

ALF. SMITH (Lincoln).—If your letter (as written) is intended to be taken seriously —which is open to doubt—we advise the purchase of "Modern Bee-Keeping: A Hand-book for Cottagers." It can be had from this office for 7d., post free.

****** Some Queries and Replies, &c., are unavoidably held over till next week.***

Editorial, Notices, &c.

BRITISH BEE-KEEPERS' ASSOCIATION

The monthly meeting of the Council was held at 105, Jermyn Street, S.W., on Wednesday, January 17, Mr. E. D. Till being voted to the chair. There were also present Messrs. R. T. Andrews, T. Bevan, W. Broughton-Carr, Dr. Elliot, J. B. Lamb, E. Walker, F. B. White, and the Secretary. Letters expressing regret at inability to attend were read from Mr. T. W. Cowan, Col. Walker, Mr. T. I. Weston, Rev. W. E. Burkitt, Mr. W. H. Harris, Mr. G. Hayes, Mr. A. G. Pugh, and Mr. W. F. Reid.

The minutes of the previous meeting were read and confirmed.

Mr. G. T. Walden, "Cumnor," 38, Kenilworth Avenue, Wimbledon, S.W., was duly elected to membership.

The Finance Committee's report, giving details in regard to receipts and expenditure to December 31, 1905, was received and adopted.

Mr. W. Herrod's report upon his work as expert and lecturer during the year 1905 was received and approved.

The question raised at the last conversazione as to the desirability or otherwise of altering the dimensions of or strengthening the "standard frame" was brought up for consideration. After some discussion and the reading of letters bearing upon the matter, it was resolved to invite those bee-keepers or manufacurers of appliances who have had experience in the use or making of frames, other than the standard, to send specimens to the Secretary (12, Hanover Square, London, W.), and at the same time to give their opinions as to merits or demerits. The Council propose to collect all possible information in regard to the matter, and to thoroughly weigh the evidence obtainable before coming to any decision.

The suggestion that a collection of honey samples from distinct sources should be formed was also considered, but it was thought desirable to defer this matter for the present.

The next meeting of the Council will be held on Wednesday, February 21.

DERBYSHIRE B.K.A.

Annual Meeting.

The 25th annual general meeting of the Derbyshire Bee-Keepers' Association, was held at the Town Hall, Derby, on Saturday, January 13. Present:—J. L. P. Barber, Esq., chairman, supported by R. Giles, Esq., in the vice-chair; Messrs. G. Hartley, B. Abell, G. Pallett, J. Bakewell, J. Stone, W. Henson, A. T. Salt, J. Pearman, W. Allen, J. Amatt, W. Reynolds, G. L. Bakewell, E. Swain, H. Hill, — Moncrieff, H. J. Morris, T. Austin, S. Durose, H. Brayshaw, Mrs. Harkness, and R. H. Coltman, hon. secretary. There were also present a few friends.

The hon. secretary presented his fourth annual report and statement of accounts, showing an increase of £5 13s. 5d. on the balance in hand, which, although in itself satisfactory, it was found necessary to sound a note of warning, for, although many members had been enrolled during the last four years, others had been lost by the Association, which more than counterbalanced the number of those who had joined them. The report having been adopted, the election of officers for 1906 was then proceeded with.

His Grace the Duke of Devonshire re-elected president. The vice-presidents re-elected, with addition of Major Rateliff.

The committee were also re-elected, with the exception of Mr. Martin, resigned, and with the addition of Messrs. Moncrieff and G. L. Bakewell.

The Hon. F. Strutt, hon. treasurer; Messrs. Jones and Powlson, hon. auditors; and Mr. R. A. Coltman, hon. sec., were re-elected; as were also the experts, Messrs. Rowland and Bollington, subject to their agreeing to alterations in the terms of their engagement.

The hon. secretary reported that he had, owing to the illness of the lecturer, Mr. T. W. Jones, delivered five lectures during the past season, and that the attendance had been considerably over the average.

The hon. secretary was instructed to write to Mr. Jones, expressing the hearty sympathy of the members present with him in his trouble, and trusting that he would soon be restored to health and be able to undertake the duties in the coming season.

Silver medals were then presented by the chairman to the successful exhibitors at the annual and local shows, after which a vote of thanks to the chairman and vice-chairman brought a pleasant meeting to a close.—R. H. Coltman, hon. secretary.

Correspondence.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

AMONG THE BEES.

About Queens.

[6178.] *Superseding Queens.*—When the season soon to be with us opens, a keen eye should be kept on the brood-nest from the first time the hive is examined. Note

if the patches of brood are solid and compact, that the cell-sealing is bright and healthy, and that there are no signs of disease. Further on, observe how the brood area extends. If satisfied with the rate of progress, then "hands off" is a wise rule with queens. Don't depose her on account of age alone. The rule is good as a rule, but there are exceptions. Age alone is no true criterion of a queen's failing powers. I have carried forward several mothers over two years of age in full confidence that they will give a good account of themselves. On the other hand, I have at least two last year's queens heading stocks, against whose numbers there is entered a point of interrogation, implying that there is more than a likelihood that they will be superseded as soon as young queens of 1906 can be reared. I noted just the other day that two of the leading bee-keepers of the world agreed that it *generally* pays to re-queen at the end of every second year, deleting the "always" which one of them, in his haste, had used in this connection. This has always been the teaching of our JOURNAL.

Introducing Queens.—I think it is recognised as a rule without exception that *young* bees adopt any mother given them. Here is a cue to act on. Secure as many just hatched bees from the hive operated on as you think necessary, and run them into a new cage with the queen, after her escort have been evicted. The cage placed in the hive when the old queen is withdrawn will attract no hostile attention. The bees inside will feed and attend to the new queen, and in a very few hours she may be liberated, with perfect confidence that she will be welcomed. Travelled bees are best parted from the queen before she is introduced, whatever the system of introduction, and it is safest to use a new cage for insertion into the hive.

Queen-Cells.—Amateurs complain that they cannot re-queen on account of the difficulty of raising proper cells in the proper place. I think even a novice can note a hive getting ready for swarming, and observe when it has a number of naturally raised queen-cells under way. If he accepts these, and if necessary exchanges suitable larvæ from his best and most select colony, he can cut them out when nearly ripe, and supply one or two to the hive he wishes to re-queen, or he can make up a few nucleus lots, certain that at least a proportion of them will result in securing fertilised queens. If his best hive swarms, he has another opportunity for providing himself with material for rearing some good queens, possibly equal to any turned out by most queen-breeders.

While on the subject of queen-cells, I would call attention to two plans for observing these, and cutting them out in order to prevent swarming. One, by means of an adjustable clamp, allows of the hive being tipped over so that it will rest on the back end. A little smoke puffed in below enables the bee-keeper to examine combs for queen-cells, which, if seen, can be cut out. The operation might require the services of an assistant, but it is claimed that hives can be dealt with at the rate of one a minute. In that case no interruption of work takes place, and bees would be upset scarcely at all.

The second plan demands something like a removable back. It is claimed that bees build cells only here when aided by the cunning arrangements of their owner. Slipping the movable part aside, they can be cut out at any time without any opening or manipulations. With combs constructed from full sheets of foundation, cells are very rarely built on the surface of a comb, so the plan appears feasible.

Weather.—All December and the early part of January has been open and not at all wintry. Bees have had several flights and appear in good order for the stormy time still ahead of us.

"*Dumping Honey.*"—A very common practice I find is that of forwarding consignments of honey, generally in small quantities, to the bee-keeper's family grocer, and quietly acquiesing in any price he may be willing to give for it. Naturally he tries to make the most of the transaction, and credits it at the lowest current price, regardless of quality or finish. These small quantities thus "dumped" on the counter, help to rule the market, because the purchaser is able to point out to others that he has had fine honey at that price. This is exactly what happened last season, and the price quoted was only 7½d. Those who declined were able to sell out early at a much better price. What I want to point out is that this style of selling injures the fraternity at large. The first bee-keeper with his two or three hives would have obtained at least 9d. if he had asked it, before making his consignment.—D. M. M., Banff.

BEE-KEEPING EXPERIENCES.

FROM THE ISLE OF WIGHT.

[6179.] Taken on the whole, the yield of honey in 1905 here was a little below the average. I have heard of no heavy "takes," but in one or two apiaries there has been excessive swarming and, consequently, little surplus. 1903 will be long remembered as the season "par excellence" for the island. At that time the nectar literally came rolling into our hives for many weeks from fields kept white by

successive crops of Dutch clover. My average that year was 80 lb. per hive, usually it is only from 35 to 40 lb.

In the present day of cutting prices, I have often thought if it would not be possible for the B.B.K.A. to approach one of our largest sugar or tea merchants with the object of endeavouring to persuade them to send out their produce in boxes of a suitable size and shape for adapting as frame-hives. Such boxes would find a ready sale, as any bee-keeper with the least bit of "gumption" could easily convert them into serviceable hives at a trifling cost. In districts where foul brood is rampant, a cheap hive is better in this respect than a more expensive and highly-finished article, because you can easily replace them, instead of troubling about disinfecting and running the risk of spreading the disease.

In connection with the much-desired, but now sleeping, Foul Brood Act, my experience may be interesting to some of your readers. Four years ago I had a slight outbreak in one of my 21 hives. Having no experience of the disease, I got the advice of two experts, who advised spraying combs and feeding with medicated syrup, which I did. They also detected disease in two other hives, one of which, being very bad, I destroyed, and treated the other as before. This spraying and medicating went on for three years, bad cases being destroyed, and sometimes nearly (never quite) curing one. The result was that at the end of that time I possessed 24 stocks, 16 of which were more or less diseased. Can you wonder that I was tired of the whole thing, and decided to take drastic measures, which I did by destroying 14 stocks by burning frames, quilts, etc.? I also disinfected hives and section racks as per "Guide Book," and burnt all used sections, dividers, and everything in the apiary that I could not scorch. It is only fair to mention that I effected two or three cures by making artificial swarms of stocks according to "Guide Book" instructions.

I was greatly interested in the article on "Bee Paralysis" in B.B.J. of January 4 (page 7), but it hardly meets my case, as the treatment would be possible only in the summer time, while the disease is worse here in the winter and early spring. So far as my personal experience goes, I had never heard of "Bee Paralysis" till the spring of 1904, but during the following winter and early spring some whole apiaries in the island were almost swept away by it, one bee-keeper losing 15 out of 16 stocks in frame-hives; another lost the whole of his seven skeps. I got my first experience with it last August, when I noticed a number of bees crawling on the ground in front of the hives. I soon traced it to one hive, which rapidly dwindled, and, as it was also touched with foul brood, I made short work of them with sulphur.

In the following September I, along with an expert, thoroughly examined all my hives, and five of them were very heavy with stores. I soon afterwards packed these five down for the winter with ten frames each covered with bees. It was soon noticed that some affected bees were lying about outside, but being late in the year I thought it best to leave the hives undisturbed; before the end of November, however, one lot was dead, and by the end of the year three others were also defunct. Inside of each hive there are few dozen dead bees clinging to the combs here and there, and a few more on the floor-board. There was also a small patch of brood nearly ready to emerge from the cells, and some 15 to 20lb. of stores. To-day I found the last of the five stocks attacked. None of these hives were fed in the autumn. Several stocks of driven bees I have in the garden fed entirely on sugar syrup are not affected as yet. With regard to this disease being infectious I can only say that four of the hives mentioned above were standing together at one side of the garden, and the other two near each other in the middle. I have not seen anything in print on this subject, so I may be wrong in my diagnosis, if so, I shall be glad to be put right by our editors or any of the contributors. It seems to be a new enemy of bee-keepers which has reached this island—one that we cannot afford to ignore, threatening to rival foul brood in the rapidity of its action, if not in its infectiousness. As the "Guide Book" does not mention anything about it, we should be grateful for advice and instruction through the medium of the B.B.J. The following are a few points which I seek help on. (1) Is there a good book or article on the subject? (2) Would it be safe to use the combs of honey for feeding driven bees? (3) Is there any known preventive of the disease? (4) Can you recommend any cure for the lot now dying? (5) Is the disease widespread and common over England. (6) Is it infectious?—SAM YANK, Yarmouth, January 9.

[1. No; at least, not that we know of. 2. So far as we can learn from American views on the subject the danger of infection does not lie in the food stored in hives. 3 and 4. The article in our issue of January 4 (page 7) answers both these queries. 5. No; it is only in warmer climates than ours that the disease is widespread. 6. In a certain degree, we may answer in the affirmative.—EDS.]

ODDS AND ENDS ABOUT BEES.

[6180.] A couple of years ago, two swarms issued in my apiary about the same time, and settled in a low branch of a thorn tree. As soon as they were fairly settled, I went forward, and noticing a handful of bees on the ground, ran my finger through them to see if there was a queen there. To my surprise, there were two, grappling with each other. I attempted to seize both and separate them, but in doing so, a momentary advantage was given to one, and in an instant the fatal sting was driven home.

About Birds and Bees.—The Common Gull frequents this district both summer and winter, and at times they fly in large numbers in small circles between the house and my bee-hives. I did not suspect plundering on their part till the local gamekeeper, noticing their continued circling about the hives, said he was confident they would seize and carry off the bees. He had often noticed them catching moths in this way. If I find them doing the same again, I shall shoot one or two to see if they have been snapping up bees for food.

I found last summer that the shallow-frames in simple boxes readily moved towards the end of the box, and bees were often crushed. To prevent this, I nailed a quarter-inch strip of wood inside the box—but half an inch down. In this way, no backing is needed, for the ends of the frames, if W.B.C. ends are used, and neither the queen nor the bees can be crushed, unless by a mishap.

In using "Well's" hives, I may say that in order to prevent the perforated division-board warping, I nail quarter-inch strips on each side of the ends, and so it slides up and in a groove, and no fear need be entertained of mishaps to the queens.

Several of your correspondents, apparently, are confident that—contrary to general belief—fertile queens sometimes do take an airing flight after the bees have been confined for a time, and the chance of a flight occurs. Some years ago, I observed the bees of one hive taking longer to settle down than the others—after a cleansing flight—and on going along to ascertain the cause, I found the queen, a young fertile one, on the ground with two or three bees in the last throes of existence. I picked her up and re-introduced her at once, but she had been carried out again—no doubt mournfully—by the next day. This was in December, and I joined the bees up in the following March to another stock.

Another incident connected with queens is worth recording: Last year I had a young queen in a nucleus hive, which I observed flying out several times for mating. One evening, however, on returning home, I found the bees of this nucleus in an excited state, and in consequence, I went round the nearest hives to see if the young queen in question had again been out, and, in returning had mistaken her way home. In searching about, I accidentally turned over a wisp of hay in front of a hive, and there, sure enough, found the truant. She was soon restored to her family, and began to lay in a day or two, but her progeny all turned out drones. I think she would be about fifteen days old. I am sorry I did not send her up for examination.

While on the subject of queen mating, I may say an early batch failed to mate. Of virgins bought, 80 per cent. were mated out rather slow. Of my own rearing about the same per cent. was obtained, but few began to lay earlier than twenty days after hatching.

As some readers are known to keep their BEE JOURNALS for reference, may I say that six months' numbers may be easily bound together by placing them carefully in order and piercing three holes with a strong bradawl about a quarter of an inch from the back of the volumes. Then run a piece of thin string down one hole, up the next, down the third, and return, tying where the start was made. With the JOURNALS thus strung together in half-yearly lots, it is easy to while away many a weary night. The index at the end of the volume shows us each subject we may be specially interested in, and the names of the most prominent contributors of the year. In 1904, Mr. L. S. Crawshaw gave the most impressive warning a young bee-keeper needs, viz., "Do not follow a multiplicity of methods." Do not change your plans because some correspondent tells us such a method paid well with him. There is no part of hive management that is stereotyped. Let me mention a few: Many bee-keepers adhere rigidly to the 10-framed "W.B.C." hive or some other 10-framed type. Some prefer the double walled hives, others the single-walled; some like wide shouldered, self-spacing frames; some "W.B.C." ends; some others. We hear of bee-keepers pinning their faith to hives holding 12-frames, some to 14, or 15; and some give the queen a roving commission over 18 or 20 frames. Then with regard to queen excluders. Some refuse to use them at all. Others invariably use them. Some frown upon porches; others insist on having them. Many authorities advise leaving only as many frames for winter as the bees can cover; others leave all brood-frames undisturbed, and so on through the whole range of methods and systems, on the

(*Continued on page 36.*)

HOMES OF THE HONEY BEE.

THE APIARIES OF OUR READERS.

The attractive little "town bee-garden" seen below, with its owner, Mr. Powlson and his wife, affords a good illustration of what can be done by an enthusiastic bee-keeper of the best sort in adapting himself to changed conditions. Not only so, but it shows how a real love for bees may begin in boyhood and continue undiminished through life. For the rest, our friend's interesting and useful "Notes" need no addition from us beyond saying that we hope they will be taken to heart by readers. He says: —

MR. S. POWLSON'S APIARY, BEDFORD STREET, DERBY.

"In complying with your request for a few 'notes' in connection with the photograph of my 'town bee-garden,' I may say that I have been interested in bee-keeping from boyhood, my father having kept bees in the early 'fifties, when I was quite a boy; and I well remember, when assisting in the cruel work of the sulphur-pit, how I used to listen for the hum of the bees dying away, as they were overcome by the deadly fumes of the burning sulphur. Later on, while living in the country, I kept a few skeps, but, as I did not destroy the bees, my profit was small. About this period I obtained a copy of Pettigrew's 'Handy Book of Bees,' and from it I learned some useful hints on bee-management; but, having given up farming to take up work in the town shortly after, this change put an end to my bee-keeping for a time. The writer of the 'Handy Book' entertained a very strong opinion that wooden hives were altogether unsuitable habitations for bees, and did all in his power to discontinue their use. It would, no doubt, astonish him if he could return and see how completely they are adopted by all advanced bee-keepers of the present day. Changing my residence later on to one on the outskirts of the town, my old hankering for the bees asserted itself, and eleven years ago I started with a good swarm hived a fortnight before, removing it ten or a dozen miles by rail. The task was very carefully carried out, as I imagined, but on turning the skep over on to its stand several of the newly-built combs fell down all in a heap with the weight of honey gathered, and in consequence most of the bees (including the queen) were destroyed. Nothing daunted, I purchased another lot in the autumn and started afresh. My new stock wintered all right, and I made an artificial swarm from it in the following June, housing the swarm in a new frame-hive. Unfortunately, owing to inexperience, both myself and my wife got badly stung by the returning bees through not removing the

skep some distance away from their stand before starting to drive the bees. I had not then heard of the 'Guide Book,' or should have managed better, and avoided the stinging. Having carefully read Mr. Cowan's book, I have found it and the RECORD sufficient to meet nearly all the difficulties of my bee-keeping career, though on one or two occasions I have applied to you through the query and reply column when cases of unusual difficulty presented themselves. I also made the acquaintance of a bee-keeping friend, to whom I have been indebted for kindly help when needed. If beginners with bees would only get the 'Guide Book,' which I consider the best and most practical work I have met with, and study it as a preliminary to buying bees, there would be fewer failures to report, and the pleasure of bee-keeping would be greatly enhanced. My takes of honey do not compare with some reported in your papers, but I manage to make a small profit, and get a good deal of pleasure out of my 'hobby,' and am therefore contented with results. Fortunately, I have hitherto had no experience of foul brood, and hope I may long continue in ignorance of it, though I should be pleased to see the 'Foul Brood Bill passed into law. The photograph, taken from the kitchen window, shows rather plainly, I fear, that my hives are all home-made; and the building at the bottom of the path — with a Morello cherry in full bloom on the wall—is the workshop where I find amusement in spare hours in making hives and doing other work connected with the craft. The lady in front is my wife, who has always taken the greatest interest in my hobby, and also done a considerable amount of work connected with it, she can, on occasion, hive a swarm."

("*Odds and Ends About Bees*," *continued from page* 34.)

value of which even doctors differ in opinion. Is it, then, any wonder that in such subjects as queen-raising and nucleus-forming, there should be equally divergence of views? No one can look over back volumes of the B.B.J. without feeling that a sort of chaos reigns in the minds at least of many bee-keepers. But it is possible to reconcile conflicting methods with a due measure of success and to receive encouragement both from the failure and success of others; and I will endeavour to point out some of the pros and cons of various methods, so far as they strike an observant onlooker, in a future issue.

Almost half a lifetime ago I visited Ballindalloch and the neighbourhood so well represented by your esteemed correspondent "D. M. M." Even then bees were in my head—figuratively speaking—but the scenes in which I played a part are ineffaceable with time.

> Ah me! the sunny days of youth return
> Through clouded years of pain,
> But I would live the anguish o'er
> To feel youth's hope again.

D. V., Dunaskin, January 18.

SOME PASSING NOTES.

BY A BEE-KEEPING GARDENER.

[6181.] Many thanks for inserting the picture of my apiary in B.B.J. of December 14. I thought it would prove interesting to add one more to your list of bee-keeping gardeners. I may now add a line to say that in a nobleman's estalishment, where I was journeyman 16 or 18 years ago, a great many nice sections went into the mansion, and the county expert regularly paid his visits to the apiary. I am also certain that if any young gardener has the opportunity of looking after the bees in a garden where he is employed, he might make it not only a source of great pleasure to himself, but it may prove very useful in after years, for it sometimes may secure him a good berth that he would miss if he knew nothing about bees. It costs nothing to carry a knowledge of bee-craft in one's head, and we never know when it may be wanted.

In reply to your correspondent "Speed," who inquires about the Cowan honey extractor, *vide* B.B.J. of December 7 last (page 487), I think he will find a two-frame "Cowan" extractor (reversible) large enough for him. I have one of these and with two pairs of hands at work, one uncapping, the other attending to the machine, he will be able to extract a good deal of honey in a very short time; as for "ball-bearings," I don't think these will in any way improve on the gear as sent out. I got mine from the late Mr. J. H. Howard, and no one need wish to have a more easy working machine.

Referring to the question asked by "A Reader" (page 514 of your issue of December 28), on "Causing Swarms to Settle," I can confirm our Editor's view that water from a garden syringe will bring the swarm down if the bees seem disinclined to cluster, for I have used it often. As a gardener I always have a syringe and pail with water handy at swarming time, and I have never lost a swarm; in fact, the bees have not once gone outside of the place. I do not use a jet on the syringe, but screw on a fine rose, and let the swarm get well out before using the water. I have seen the syringe used too soon, and it has caused the bees to return to the hive without settling at all.

In closing my "passing notes," I send you a rough sample of beeswax for your

opinion as regards its quality. I take great interest in wax, and can always sell it without much trouble. My way of working is to burn up all old frames and combs after they have done their full term of usefulness in the brood-nest, my experience showing that there is not enough wax got out of them to make it worth the bother and trouble of extracting. My sample is from cappings melted by steam in an extractor (a modification of Gerstler's, with many improvements suggested by Mr. Cowan and others). The enclosed sample of paper I have found very warm to lay over quilts. What is your opinion of it?—G. C. BURGESS, Bishops Stortford, Herts.

[Material sent is the thick paper-felt used under carpets, and will no doubt be useful in conserving the warmth of brood-nests in early spring.—EDS.]

HOME-MADE APPLIANCES.

[6182.] Will you please tell me through the columns of your valued JOURNAL if the enclosed candy could be called good for bees? I have never seen any, except that of my own make, and the bees take it well and seem to like it. It costs me about 2¾d. per lb., and is easy to make, but I am only an amateur at the job, as I am at all other bee work. I make nearly all my appliances, including hives, honey-ripeners, wax extractors, wax moulds, smelters, slotted dividers, etc. The only things I buy are frames, sections, and foundation. I sometimes even make "tin-ends" when my stock runs short, which is an advantage, as they can be made of any width to suit requirements. I see the tin ends are objected to by some for various reasons, but I find them better than any other way of spacing frames. The complaint sometimes made that they are a nest for the wax moth can easily be got over by filling the ends with putty. The same may be used for the saw-cut of top-bars, and the putty serves to strengthen both. I use the seven-eighths by three-eighths bar, with saw-cut, and find them answer very well indeed; when properly wired it is almost impossible for them to sag or bulge.

Since the recent discussion on strength of top-bars and width of sections I have carefully examined my frames, and cannot see anything in the shape of "sagging" worth notice, the combs being as straight as a line, and no fault is there with the sections used. Great credit is due to those who brought out both as being very good and useful to bee-keepers. It would take a clever man to please all and in my opinion he is a fool who tries. I think there is some room for improvement in hives, as after reading the "Guide Book," the B.B.J., and the many catalogues sent out by makers, I cannot see a complete hive to satisfy me. I mean one that is simple and economical; one that needs less handling of the bees, and consequently more honey. I try experiments in improving the hives in use; some are failures, but I gain experience, and we always have to pay for our learning. I conclude with the usual wish that all bee-men may have a good honey year in 1906, and as I do not like the use of an "X.Y.Z." for signature, or, indeed, a nom de plume of any kind, I send address for reference, and sign my own name,—JAMES PILE, January 16.

EARLY BREEDING.

[6183.] It may be of interest to bee-keepers to hear of a bee-experience we had here on December 9. On that date we noticed that a mouse had eaten its way into a hive and made its nest there; the day being fine and warm, it was decided to clear the intruder out, nest and all. On opening the hive for this purpose, to our astonishment we found on one comb a patch of eggs, larvæ and brood, quite six inches in diameter. Moreover, the colony was not a strong one. This is very unusual, because breeding generally ceases in October. However, it only goes to show that "bees do nothing invariably."—HERROD AND STEWART, Luton, January 20.

TRANSPORTING BEES TO S. AFRICA.

Messrs. Abbott Bros. have kindly favoured us with the following letter for publication as possessing interest for bee-keepers and readers in general:—

"Dear Sirs,—It may have seemed a very long time indeed between the date of this letter and the day when you handed to my friend, Mr. Dent, a full colony of English bees from your apiary ready packed for export to South Africa. My work had all to begin upon their arrival here, and for some months it was an open question whether my experiment would prove successful or otherwise.

"Now, however, the enclosed newspaper cutting will prove that English bees can be brought to the Transvaal and will thrive here.

"The enclosed letter was published in the *Transvaal Agricultural Journal*, which is a Government quarterly publication of about 150 to 200 pages, very fully illustrated, and with a circulation of about 8,000 copies. It is published both in Dutch and English, and is very widely read throughout the Transvaal.

"At the time of writing my bees are

doing little or nothing in the way of honey-gathering, though the queen is laying well. Our rainy season has just commenced, and in about another fortnight I hope to see the bees bringing in something more than pollen.

"Before next season closes I hope to be able to write you as to my success or otherwise in queen-breeding, though I have grave doubts as to the purity of the next generations, seeing that my hive of English bees is one among hundreds of the South African breed, and I do not quite see how I am to guarantee that any young queen has been fertilised by a drone from my English stock! With kind regards, yours very truly,—ALEX. S. BENSON, Pretoria, November 26, 1905.

[Want of space prevents insertion of the whole article referred to; we, therefore, print such portions as are of most importance to readers in this country.—EDS.]

Writing to the *Transvaal Agricultural Journal*, Mr. Alexander S. Benson, Pretoria, says:—

"It may interest your readers to know that there is at present in Pretoria a colony of bees which but a few months ago were gathering honey in the South of England.

"It was only after two unsuccessful experiments with the importation of English queens, packed as they were in separate cages, with their bodyguard of workers, that I finally decided to attempt the importation of English bees into the Transvaal, and I trust that the details and result of my experiment may serve to interest that section of your readers devoted to bee-keeping.

Messrs. Abbott and Co., the noted apiarists in the South of England, supplied me with the swarm ready packed for export in a box specially made for the occasion. The lower portion of the box contained ten English standard frames taken just as they stood, for better or worse, from a strong swarm of this year in Mr. Abbott's apiary. When they left England the combs contained brood in all its stages of development, honey, and pollen; when the hive arrived in Pretoria brood there was none; the young bees had emerged from their cells, some, alas! only to die on the voyage. Of honey there was neither trace nor smell, but unused pollen was still to be found in the cells.

"The upper portion of the box, to a depth of about seven inches, was empty, and, in my opinion, the success of the scheme is largely attributable to the forethought and knowledge of Mr. Abbott in allowing this amount of air-space and ventilation.

"I met the travellers at the station, and before long I had one of the frames in my hands. My first verdict was, 'All are dead.' However, I removed all the frames from the box and placed them on a white sheet in front of their new home. It was midday; the sun was fortunately fairly powerful, and in a very few minutes it was plain that some of them intended to make a brave struggle for life; very, very gently at first did their wings begin to quiver and their antennæ to move, and then came the first soft hum as of bees emerging from their months of hibernation.

"And now I bethought me it was time to look for the queen. At last I found her with a small posse of attendants, all of them apparently quite dead. But within fifteen minutes of my first glimpse of her she commenced, true to her natural instinct, to crawl on to the underside of the frame in order to escape from the light and observation.

"I had been informed by letter that the hive contained about 15,000 bees, but of these some 4,000 had died on board ship—this was apparent from the shrivelled condition of the corpses; 2,000 to 2,500 only lived to protect their queen and carry on their work in the Transvaal; the remainder succumbed to the effects of the cold they had been subjected to during the railway journey.

"Now came the real test of my experiment. Would they become acclimatised, and would they accommodate themselves to their new surroundings, and, above all else, would the queen begin to lay? The hive I was using—probably the best stamp of hive imported into this country—was Taylor's "W.B.C." hive, with the double-walled brood-chamber. The bees that had survived barely covered three British standard frames, and therefore, by the use of a dummy board, I narrowed the hive down to this compass, and proceeded to feed them freely with syrup. I also purchased some local honey in sections, which, from its colour, had evidently been gathered from the gum-tree blossom in April and May; but the bees did not take at all kindly to it, and preferred the syrup.

"A fortnight passed, then three weeks, but still no sign of eggs; and in the beginning of July, when I knew that African queens in the near neighbourhood were laying freely, I came to the conclusion that the cold weather alone was not accountable for the English queen's dilatoriness. I therefore borrowed two frames of hatching worker-brood from a bee-keeping friend, and placed them in the hive. It was almost ludicrous to watch the result; every bee in the hive at once left the work she was engaged at in order to cover up the brood and keep it warm, and the change of note in the hum of the hive would have been distinguished by the merest novice.

"Within a week the queen had begun

to lay, not more than 100 or 150 eggs all told, but there they were nevertheless. I looked at the hive again in five days to assure myself that they were worker and not drone eggs which the queen, had the voyage rendered her unfertile, might have laid in worker-comb, and this time there was not a trace to be seen of eggs or larvæ or brood in any stage; it had all been eaten by the bees, who discovered when too late how changeable the weather can be in the Transvaal in the month of July. About August 10 I again examined the hive, and this time found what I wanted—on each side of one of the frames a patch of brood about the size of the palm of the hand—showing worker-brood in all its stages, with here and there a young English bee poking her nose out of the cell into a future life in a new continent. My patience was at last rewarded; my experiment had proved successful.

"I cannot, of course, expect a mere nucleus like my present hive to increase very rapidly, but by the end of this fruit season I hope to be able to satisfy myself as to whether the English bee, when in this Colony, will finish off his work in the same dainty manner which we now see at all the large honey shows in the old country."

Queries and Replies.

[3194.] *Glucose as Bee Food.*—Honey, I understand, is mainly composed of sugar and glucose. This being so, would it not be advantageous, instead of feeding on sugar only, to use a mixture of sugar-syrup and glucose, say in equal quantities? One would, at any rate, imagine that the nearer we approach to the natural food of the "Insect," so much nearer are we to a perfect bee-food. It is admitted that sugar-syrup is inferior to natural stores for wintering bees on and this leads me to ask—1. Do you think a mixture with glucose would be inferior? Glucose can be bought at the same price as cane sugar, and would not affect the cost. It may, however, be that the glucose ordinarily sold is not pure enough for this purpose. 2. Perhaps you can also enlighten me on the above. 3. Your article last week states that entrances to hives should be closed to about two inches in winter. The "Guide Book," however, says they should be opened to about six inches. Which is right? 4. Is ventilation or warmth the more important? Reply in your valued paper to "Glucose," Darlington, January 15, will oblige.

Reply.—1 and 2. It would take too much of our space to go fully into the physiological reasons why glucose is injurious to bees, but this question was practically solved many years ago, when it was found that the mortality among bees fed on glucose was very great. Honey is composed of dextrose and levulose, which differs from commercial glucose in that only part of the corn starch from which it is made is converted into dextrose, the remainder forming maltose and dextrine, and it contains no levulose at all. Oxalic or sulphuric acid is used in the conversion, and this has to be neutralised by the addition of lime. In the laboratory it is generally quite easy to make pure glucose and remove every trace of acid, but commercially it is practically impossible to get rid of all this acid. Glucose, therefore, without the levulose is an imperfect food, and even if pure, would be of less value than cane sugar, as it is only one-half as sweet as this. It is, therefore, not only injurious, but also inferior to cane sugar. If you are interested in the subject you will find it fully treated in a paper read before the National Bee-Keepers' Convention in Chicago in 1900, by Thos. Wm. Cowan, on "The Chemistry of Honey, and how to Detect its Adulteration." The paper in question was printed in the B.B.J. of December 13 and 20, vol. 28. 3. There was no article of ours in B.B.J. of January 4 in which the width of entrances to hives in winter was dealt with. The directions in "Guide Book" gives our view, but there may be conditions under which it is advisable to reduce entrances still farther. Readers are always supposed to use their intelligence when special contingencies arise.

[3195.] *Mounting Objects for the Microscope.*—Some months ago I obtained the back numbers of the Bee Journal containing instructions on "Mounting objects for microscopic use," and therein I read of "Labarraque's solution," which was mentioned many times. I have made inquiries at several opticians, but none of them seem to know it, all I can find out being that it is chlorinated soda. Would it be troubling you too much if I ask you 1, to give the formula? I now use turpentine as a decoloriser, but find it rather slow, owing, no doubt, to the bad light in the winter. 2. I also wish to ask another favour. Would you save me a piece of foul brood comb in the advanced stage, as I want to mount a piece for instructional purposes? I know it is against your rule to send out any samples of diseased comb, but I read in an answer to a correspondent in the B.B.J. some weeks back that you did occasionally go beyond the above rule and allow a piece to go out for scientific purposes, hence my request. It is, of course, late in the year now for suitable specimens to be available, but if I have your promise to supply me with a piece at some future time, I need

not trouble any further just now, knowing that samples are only too plentiful at your office in the spring. Otherwise I shall have to go searching for a specimen, as I must have a piece for my purpose. I propose making a glass box about three inches square on the face, and using a 5 per cent. solution of formalin as a preservative. Do you think that would do?—G. T. W., Wimbledon, S.W.

REPLY.—1. Labarraque's solution can be obtained from any chemist of good standing, or if not in stock, it would be prepared to order. It can also be had of dealers in microscopic objects and preparations, such as Messrs. Baker, Holborn, W.C., or of Becker and Co., Chemists, Maiden Lane, W.C. 2. We will supply a suitable piece of comb if reminded, say, at end of April, on your undertaking to use it with care, so far as doing no possible damage is concerned.

[3196.] *Light Brood-Foundation for use in full Sheets.*—Will you kindly tell me if it would be satisfactory to use full sheets of thin brood foundation ("Weed" 10 sheets to the lb.)? I ask because of my intention to "wire" all my brood frames in the coming season. Or do you think it better for me to keep to the thick (7 sheets to the lb.)? I shall "wire" in either case. 2. Also, can you tell me of an appliance-dealer who makes "Standard" and shallow-frames with solid top-bar (no saw cut, etc.), but without any other deviation from the ordinary pattern?—L. I., Cambridge, January 15.

REPLY.—1. It is quite safe to use full sheets of light brood-foundation if properly wired, and only foundation of good quality, such as the "Weed" is used. 2. Any leading appliance maker will supply frames without saw-cut in top-bar if asked to do so.

[3197.] *Transferring Bees.*—1. Would you kindly give me the help of your wide experience in the following case? In June last year I had a rather small swarm of bees given me in a straw skep. I intended eventually to transfer them to a frame-hive; but not getting this till early in July I thought it best to effect the transfer by driving, but on examining the skep I found that the bees had built about five or six combs, which were full of brood. It should be explained that as soon as the bees came into my possession I commenced feeding with syrup, as advised in the "Guide Book." Thinking it best not to disturb them in consequence of the brood, I decided to let the bees transfer themselves, as recommended on page 141. I placed the skep above the frames with full sheets of comb foundation. The bees, however, would have none of it, but remained in the skep. I fed them all through the year with syrup, giving about 2lb. to 3lb. per week, and since September they have had as much candy as they require, so they should winter well. I have only seen four or five dead bees throughout the winter so far; and as I wish to get them on the frames for the coming season, would you kindly advise me through the medium of the B.B.J. as to the best way to proceed now to effect the end in view? 2. I enclose a sample of the candy I made for your inspection.—W. H. S., Chipping Sodbury, January 19.

REPLY.—1. The refusal of the bees to transfer themselves is accounted for by the fact of there being no lack of room for their wants and plenty of breeding-space in the skep. It is only when a stock in skep is crowded out for want of room in brood-nest, and disposed to swarm, that they will transfer themselves to a frame-hive. If they are not occupying the frame-hive at all it had better be removed and the bees wintered in the skep. Then in the coming spring, when they are seen to be occupying the skep fully, set it above frames as directed. 2. The candy sent us, though moderately good, is hardly boiled enough. Why not try Br. Colomban's recipe as given in a recent issue?

Notices to Correspondents & Inquirers.

J. H. (Perthshire).—Size of Box-super for Use at Honey Shows.—The "box-super" for use at shows where these are included in the prize lists varies according to the schedule; but this kind of super is very rarely included in shows outside Scotland, so that there is no guide by which we can help you. The list sent expressly excludes "sections" from the class, and clearly specifies the size as "14 in. by 3½ in. deep." This course will probably be followed at all shows where supers of that kind are included in the competition.

(REV.) SAMUEL L. ORR (Monaghan).—Diagrams on Bee-keeping.—The diagrams published by the B.B.K.A. are just sold out. It is probable that a new and revised edition—brought up to date—will be published before very long, and will be advertised in due course when ready.

H. H. P. (Somerset).—"Mind in Animals."—Professor Ludwig Büchner's work, "The Bee Nation: Mind in Animals," 1880, translated, with the author's permission, from the third revised edition, by Annie Besant, may be ordered through any bookseller.

J. P. P. (Worcester).—Chapman Honey-plant.—Your are quite right; it is a perennial, and the word on page 20 is incorrect. We may also say it may be propagated by division of roots in spring.

Editorial, Notices, &c.

THE STANDARD FRAME.

AN APPEAL FOR CO-OPERATION.

It would be noticed in our report of the B.B.K.A. meeting last week that the question of proposed alterations in the "standard frame" again came up for consideration. We may, therefore, in view of the uncertainty which seems to exist in the minds of some readers, refer to the matter here with the object of stating the position at somewhat greater length than in the brief report referred to. First, then, let us say, bee-keepers who are interested in the matter may dismiss from their minds all fears that any hasty conclusions will be formed, or that the question will be decided — as some appear to think likely — by the B.B.K.A. alone.

There is no desire whatever on the part of the Council of the parent association to do more than take its proper share in the discussion, and other qualified men are invited to do the same. No doubt a small committee will eventually be appointed, who will report to the Council, and, after full consideration, a final decision will then be arrived at.

In the meantime it is earnestly requested that specimen frames, embodying the ideas of senders, will be forwarded to the B.B.K.A. office, 12, Hanover Square, London, for the consideration of those dealing with the subject. Manufacturers of bee-appliances and those who have had large practical experience of bee-work are specially asked to take the matter up for the common good of the industry in general. All specimen frames should have attached to them a full description of the advantages claimed. They should also be accompanied by a reliable estimate of price per gross, or per thousand, in order that the very important point of cost of production may not be lost sight of.

Above all things, we earnestly hope that no attempt will be made to interfere with the vital point of the whole matter, i.e., the necessity for ensuring that any improved or altered frame is interchangeable with those already in almost universal use in this country. To interefere with this in any way would lead to results we do not like to contemplate, but we may safely leave that part of the question to those in whose hands the final decision will rest.

If bee-keepers will co-operate heartily and in the spirit of fraternal good fellowship during the next three months, not only in dealing with the standard frame, but also on the vexed question of adopting a uniform width of 1lb. section for general use in this country, it will tend very greatly towards the advancement of bee-keeping as a whole.

There is, to our mind, no single item of bee-management more important than uniformity and interchangeability in the appliances used, and practical bee-men will no doubt be the first to admit this.

Correspondence.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper We do not undertake to return rejected communication

NOTES BY THE WAY.

[6184.] "February fill dyke, either with the black or white," is again with us, and the lengthening of days reminds us that spring is coming; indeed, a few of its welcome harbingers are with us even now, the early flowers putting forth their blossoms, while the birds are singing on all sides, and the lark has began to soar skywards. The bees also had several opportunities of flight during the past week in January. These "pointers" should call the attention of bee-keepers to the necessity of preparation for the coming season. If new bee-goods are required orders should be placed early. If the establishing of an out-apiary be contemplated, the position must be selected and arrangements made for locating the hives, because an early removal is essential, unless the distance is over two miles; though on this last point, however, the experience of Mr. Alexander, an American bee-keeper on a large scale, may be considered applicable to this country. That gentleman contends that bees may be kept in very large numbers in one apiary with greater advantage to the bee-keeper than in several apiaries a few miles apart. It appears that Mr. A. has tried both systems, and he now keeps one large apiary of some 750 hives. Bee-keepers in this country have got into the same groove of thought that Mr. Alexander followed some time ago—viz., that apiaries of about 100 hives were as many colonies as could be kept with advantage in one bee-yard, and that an extension of stock necessitated acquiring another location on which to establish an out-apiary. This means a considerable addition to the cost of management, for in most instances a pony and trap might be needed, or if near a railway there would be a continual expense for cost of travelling, and in either case a considerable loss of time would be taken up with journeys to and from the out-apiary, with all the

multifarious items required in its management and working. Now, however, Mr. Alexander keeps all his erstwhile out-apiaries in one large bee-yard at home, and he finds it is more profitable to allow the bees to collect their honey far and wide than when kept in smaller numbers and distributed in out-apiaries (vide *Gleanings*).

Should we get a spell of cold weather, do not forget to see that the entrances of hives are kept clear of dead bees, and in case of snowstorms the snow should be swept off the hive-roofs before it thaws; if the sun shines while snow is on the ground hive-entrances should be shaded. The ordinary extending alighting-board makes a good shade if leaned up in front of the entrances. A large proportion of the bees that take flight at such times fail to return to the hive, the white snow apparently alluring them to destruction; they alight on the cold snow, become chilled, and die in a few seconds. — W. Woodley, Beedon, Newbury.

"PAINTED QUEEN BEES."

[6185.] I read with some interest the contribution on the above subject in your issue of January 11 (6163, page 12). My eyesight not being now so good as it once was, I for one would be glad to hear that queens could be by some means made more easy to recognise on the combs.

Searching for a queen is, to me, at least, a disagreeable business at all times, but when it has to be a prolonged, and often an unsuccessful, task, it is very unsatisfactory, being injurious to the bees, and often injurious to the bee-man, besides being a waste of time. I experience no difficulty in spotting a yellow queen in a stock of black bees, because she is different in colour to her surroundings.

In all my experience of bee-shows I have never seen a painted queen in observatory hives; but, no doubt, right or wrong, painting would render queens much more easily recognisable.

If, however, the marking of a queen cannot be accomplished without injury, or if it in any way retards the mother-bee in the proper discharge of her maternal duties, it would be folly to attempt it.

I fail, however, to see any connection between queen daubed with paint and being "worried" with the *Braula coeca* (or blind louse); but I think the painted-queen one would be the more comfortable of the two. I am of opinion also that oil-paint applied to a queen-bee would quickly rid her of the "lice" in question. One thing I am certain of—viz., that oil applied to cattle for that purpose is a sure and safe remedy, besides improving their skins. We should also bear in mind the many coats of colouring the worker-bee gets in the visits it pays to the different coloured blossoms; still, it does not seem to interfere in any way with its usefulness.

I have never clipped a queen's wings myself, nor seen it done, although it is a common practice amongst bee-keepers in this locality. I cannot help thinking, however, that the operation is a cruel one, and there is no doubt that the results often are, when queen leaves the hive unobserved and perishes on the ground through being unable to return to the hive. Surely some means of marking a queen's wings could be resorted to which would not be so cruel as "clipping"—some method of properly applying the proper material, the result of which would make queens a different colour from the other bees.

If this can be done without injury to the queen, no doubt it would be a great boon to the busy bee-keeper, to say nothing of old ones like myself, who are getting a bit blind.—Alexander Reid, Balloan, Urray, N.B.

[There seems to be some confusion in the mind of our correspondent, first, with regard to "marking a queen's wings" by the operation known as "clipping." This is done, not with any idea of "marking" for the purpose of easy recognition, but of rendering the insect incapable of flight by removing the greater part of one wing with a pair of scissors. Thus mutilated, the queen falls to the ground on issuing with a swarm, while the latter returns to the hive. Second, with reference to the "coat of colouring the worker-bee gets," without any harm or detriment to its usefulness. By this is meant the pollen-dust gathered on the multitudinous hairs on the body of the bee during its daily search for nectar in various flowers. But it is well-known that the worker-bee is provided with a most beautiful and delicate apparatus by means of which all pollen-dust is easily removed from its hairy body, and stored where wanted in the hive. The difference between oil-paint and pollen is obvious. This brings us to the main point at issue—viz., the cruelty, as we regard it, of daubing the mother-bee of the colony with a coat (or coats) of paint for any purpose whatever; and we sincerely hope that our correspondent, Mr. Swabey, will reconsider his position and modify his views. According to the letter on page 12, he not only seeks to justify the practice of painting queens in observatory hives at shows, but recommends successive coats of paint being put on queens for defining age, etc., by queen-breeders. So intelligent a bee-man as he undoubtedly is should surely agree that a qualified bee-expert, usefully employed by county councils as a lecturer in teaching humanity to that industrious little labourer, the honey-bee, should avoid

anything that inflicts needless discomfort and misery on the single member of the bee-community on which prosperity depends, should be discountenanced by all who are best in the craft.—EDS.]

IMPROVEMENT IN HIVES.

[6186.] Your correspondent, Mr. James Pile (6182, page 37), complains that he cannot find a "complete hive" to satisfy him. Well, Sirs, he must be hard to please, I should imagine. But why does he not evolve a perfect hive from his own brain? He tells us he makes his own "hives, honey-ripeners, wax-extractors, etc., etc." Let him give us the *ne plus ultra* in hive design and construction if he is able. "I try experiments in improving the hives in use," he says, and adds, demurely, "some are failures." He modestly refrains from telling us whether any of his experiments are "successes." "Simple and economical" hives may be had from any good maker. But, then, he wants "one that needs *less handling* of the bees, and *consequently* more honey" (italics mine). But, Sirs, what necessary connection is there between *any* make of hive, and either "less" or "more handling" of the bees? The latter depends entirely upon the bee-keeper, and a prudent man will handle as infrequently as possible, especially when honey is coming in rapidly. My "handling" consists of only spring and autumn examinations, unless I get swarms, when I cut out queen-cells to prevent "casts." I do not think any of these "handlings" would appreciably affect the amount of honey stored in supers. If "more honey" is a consequent of "less handling," then Mr. Pile has the remedy within reach. Let "hands off" be his motto, and the bees (not the hive) will do the rest. —W. H. BRILLEY, Herefordshire.

BEE-KEEPING AS AN OCCUPATION.

[6187.] I have just received the B.B.J. of November 30 and your excellent "Guide Book," and now send cash for half-year's subscription to B.B.J. I am particularly interested in the letter signed "Tyke" (page 471), and request that you will forward me the number for November 16 mentioned, along with any other dealing with the subject. With regard to "Bee-keeping as an Occupation," I wish to obtain as much information as possible in the event of my probable return to England. I should therefore be highly obliged for your personal opinion and that of your readers as to the probability of making an average clear profit of from £100 to £150 per year, given (a) an energetic and trained man who can make his own appliances, (b) a capital of £1,000 (thousand). If you are good enough to publish this letter perhaps you will mention that it is particularly requested that cost of production be given. I may mention that I am not the correspondent in India referred to in the article on page 451 of B.B.J. of November 16 last. I send name and address for reference, and sign—SAHIB, Punjab, India, December 27, 1905.

[Copies of B.B.J. containing our views are sent by post. EDS.]

HONEY CAKES.

MADE FROM BR. COLOMBAN'S RECIPE.

[6188.] The sample of honey cake of your correspondent, Mr. Melville, is not at all bad. It is rather hard, but will improve after being kept for some time. I see, however, that the heat was not quite strong enough, and not sufficiently equal, in his stove, and that the cake consequently baked quicker on the under side than on the top side. If he cannot well regulate the heat, he might put two tins instead of one under the cake, so as to prevent it from burning on the under side before the upper part is cooked. This is all I have to say on this case. I may perhaps add, for the benefit of other readers, that, as the ammonia is not always of the same strength, a rather smaller quantity than that indicated in the recipe might be used. I may also say that there are really two distinct preparations for the paste; one remote; in which case the mixing up of honey and flour, may be made with advantage several weeks beforehand, but it is important that the paste requires to be worked thoroughly up again just before using, especially as it contains ammonia. The other preparation is made the day on which the cake is baked, when the orange peel, the ground cloves and the ammonia are mixed up with it. In all cases the ammonia is to be dissolved with cold water, as hot water would weaken its strength. Quality of honey has also to be taken into consideration. With very thin honey more flour is used.

May I now be allowed to make a remark about some queries I have received from readers? I had no intention to convey the idea that cane-sugar candy is better than the honey candy for stimulating. In fact, personally, I have always acted on the conviction that the recipe of honey-candy published in your pages on September 14, 1905, is the best in all cases for the bees, and I think it is also the easiest for the bee-keeper. I mean, it is easier to make candy smooth in grain with honey than without it. I find also that honey-candy is so efficient for spring stimulation, that, so far, I have generally dispensed with syrup. It is safer, and does not cause the trouble of robbing. It is also my ex-

perience that bees do not care much for flour being mixed with candy. They do not take it well at all. Perhaps this is owing to the fact that we have plenty of natural pollen here.

I would also like to say that those who wish for honey-candy should apply for it to Mr. Geo. Rose, Liverpool, as per his advertisement. This will save time and disappointment.

Thanking all those who have kindly expressed their appreciation of my candy recipe,—Br. Colomban, St. Mary's Abbey, Buckfast, Devon, January 25.

EARLY BREEDING.

[6189.] I have read with interest Messrs. Herrod and Stewart's note re "Early Breeding" (6183, page 37). The question arose in my mind, is it early or late?

I put into winter quarters five Baby nuclei, consisting of four quarter-size standard frames. These nuclei were wintered in three ways for an experimental purpose, and here are the notes of one of these Baby nucleus hives:—December 8: Eggs, larvæ, pupæ, one frame full, gave candy; December 20th: Pupa only, comb built in candy box; January 4: No eggs, no brood, gave pollen; January 19: Eggs and larvæ; January 27: Eggs, larvæ, and pupæ. From the above it will be noted brood-rearing ceased with the closing year.

I have two more queens in Baby nuclei with eggs and larvæ; one died, the other suffered with dysentery; result, queen dead; the bees were joined to another Baby nucleus. Personally, I am well satisfied with the experiment, as it has given me a successful method of wintering Baby nuclei.—J. Gray, Long Eaton, January 27.

BEE PARALYSIS.

[6190.] About five years ago I had one stock that from the symptoms I think was afflicted with the above, and I sent some of the bees for your opinion, which was that they had the appearance of having been drowned. But you were wrong, as the hive was quite dry, and is so still. However, that year the bees nearly all died off; they crawled from the hive on to the flight-board, and died there; at least, about three pints of them did, but the queen and a few bees came through the trouble and made a good stock, but yielded no honey. The following winter the bees again became affected as before, and nearly all died off in same way. The hive in question was located at my out-apiary, so I took it home and put the bees in a new hive with combs of food from other stocks, and they did well; but each year they have been more or less affected in the same way. I uncapped some of their stores, and gave it to other stocks, but no harm followed, though the bees seem as if suffering from abdominal distension when they leave the hive, and the face of the comb is very dark, as if the bees were troubled with dysentery, while the honey has a sharp or sour taste. There is also an appearance of its granulating from the white-like crystallised sugar seen at bottom of each cell. They sent out a fine swarm last year, a good skepful coming out, so the queen is all right, and this is the first time they have swarmed in five years. I may say the capping of their sections is always much darker than those of my other hives, yet the honey is good, and the bees seem all right this year, so far.

Two years ago I showed some of the affected bees to our county expert, and he said he had never seen or heard of such a thing before. This is the only hive of the sixteen my apiary contains that has had the paralysis. Wishing a bright new year to our Editors, and a good harvest to us all,—C. Reed, Wickford, January 29.

("*Correspondence*" *continued on page* 46.)

HOMES OF THE HONEY BEE.

THE APIARIES OF OUR READERS.

The apiary of our friend Mr. Darrington, seen on next page, illustrates how bees may be kept close to dwelling-houses without being voted a nuisance by neighbours. The owner himself also combines in his own person a bee-keeping schoolmaster, who is a certificated expert, a good amateur joiner, and a useful member of the craft. For the rest, we may allow the interesting notes, sent at our request, to speak for themselves. He says:—

The photo of myself and apiary was taken by my father-in-bee-keeping, Mr. H. Meakin, Newthorpe, Notts.

Owing to the above gentleman's influence, I had a thorough practical and theoretical knowledge for some two years before I owned a hive. He it was who introduced me to the "Guide Book" and the *Record* as far back as 1892, and gave me my first hive.

I make my own hives, which are of the "combination" pattern, and very large. At the back is a small door, and flight-board, for keeping a nucleus. You see, my hives are worked on a non-swarming principle, because of the situation, and the strain of bees in No. 1 (that with hive-roof on top) have not swarmed for a dozen years at least.

I have never had a swarm, although I have tried various races of bees.

Last year I made a "W.B.C." hive from directions in the "Note Book," and although the bees in it were crowded on twenty-two standard frames and two supers of shallow-frames, they never swarmed. It will be noticed that the hives are placed very close together, so in order to give the bees a better chance of distinguishing their own domicile, No. 1 is painted a pale blue, No. 2 oak-grained, No. 3 green, and No. 4 red.

The hive uncovered and showing feeding-bottle had a queen which did not commence to lay until three weeks after fertilisation in autumn, and then began with a frame of drones in worker-cells. It was my best hive all through the spring, but in Whit-week I found she had disappeared.

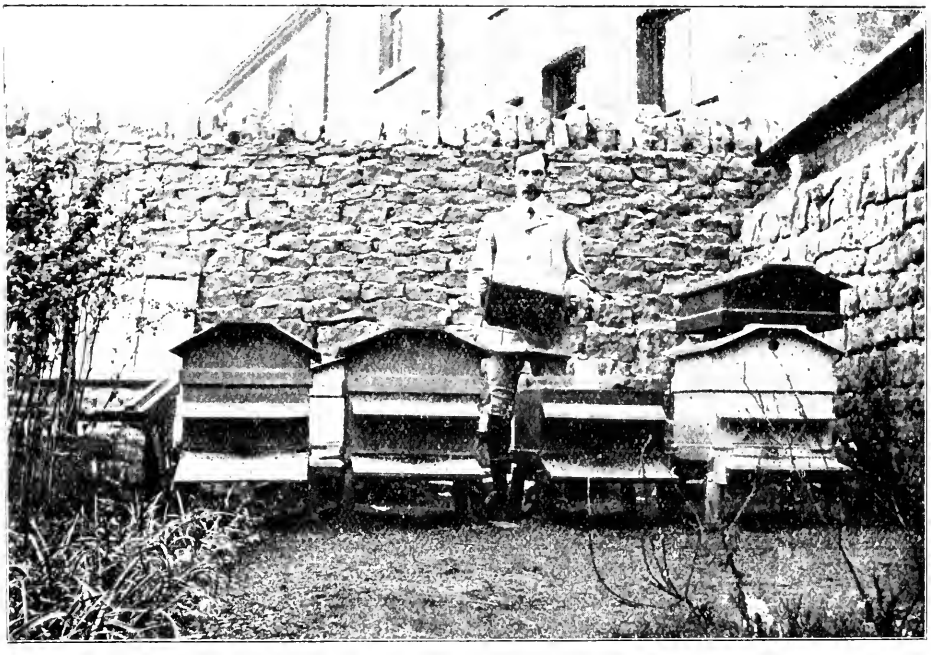
The photo was taken in the spring, and shows, on the left, a border of crocuses, which are extremely useful.

I was one of the first Notts men to take advantage of the Insurance scheme for bee-keepers, and in that matter my apiary is an object-lesson. Behind the wall at the back, when I commenced, was a field; now there are two rows of houses and a street, and in the height of the season I have seen horses driven up so close as to poke their noses over the wall. I was very pleased to think I had prepared for eventualities.

In 1903 I gained my third-class expert's certificate, and hope to go still higher, though I do not think the present expert visiting system is effective. A much better plan, to my mind, would be to encourage members to take the "Expert's" certificate, and then divide the county among them, allotting to each the immediate district in which he lives.

With regard to honey selling, this year I tried a wholesale "deal" for the first time. I asked 10s. per dozen 1 lb. jars, and was met with a decided "No." Then I asked for a quotation. This was the reply: "I lately bought a gross for 8s. 6d. per dozen, and I have no doubt I can get it for even less than that." Well, he did not get mine. I think the middleman gets far too much of the profit.

I seize every opportunity to visit well-known apiaries, and in this way have seen Mr. Rymer's and the late J. H. Howard's. I also make a practice of visiting the large honey-shows whenever convenient. In 1903 I saw the "Grocer's and Confectioners'," and last year the "Royal." In conclusion, allow me to say how much I am indebted to the BEE JOURNAL, and to thank Mr. Woodley and "D.M.M." in particular. I was delighted to discover, some months ago, that the latter is one of us, for I am another schoolmaster bee-keeper.



MR. W. DARRINGTON'S APIARY, BULWELL, NOTTINGHAM.

CORRESPONDENCE.

(*Continued from page* 44.)

REVIVING CHILLED BEES.

[6191.] The following account may be of interest, and possibly of use, to those of your readers who are, like me, beginners in bee-keeping. To-day I found on the ground, near one of my hives, about a hundred bees, apparently dead, some, however, made very slight twitches in their legs. I picked them all up and put them in a dish, covered it with glass, and placed it in front of the fire. Within half an hour they were running and flying about the dish as well as ever, all but half a dozen, which were really dead. I had placed a few drops of honey in the dish, but only a few took to it, so I conclude they were suffering from chill, and not hunger. After the half hour, I took the dish to the front of the hive, removed the glass, and except the dead half-dozen they all flew off from the dish and joined the numerous throng at the entrance of their hive.—J. B. C., Loughborough, January 28.

TWO YEARS' EXPERIENCE OF BEES.

JUTE CLOTH FOR BEE-KEEPERS' USE.

[6192.] There are two reasons for my taking the liberty of writing you, firstly, to give a brief report of my short experiance as a bee-keeper, and, secondly, to ask your opinion on the enclosed samples of jute cloth for bee-keeping purposes.

I am a bee-man of just two years' standing—this coming season will be my third—and I must say that the pursuit, which is mostly a hobby with me, has proved wonderfully successful and enjoyable. Nor could it well be otherwise when there was the sound advice of the "Guide Book" at hand, backed up by the experience and hints to be found in your weekly and monthly papers, and, perhaps best of all, the personal assistance of that experienced and able bee-keeper Mr. R. Steele, of Wormit. During the first year my one colony developed into two, at the same time yielding me over 60 lb. of honey from the two stocks. Last season these two became three, and my total honey-harvest was nearly 190 lb., of which I took from the hive not permitted to swarm 114 lb. of surplus, mostly sections. I would very much like to limit my apiary to three hives, but am afraid this policy will not suit "my little friends" the bees. The chief sources of nectar in the district—or, rather, half district, for it is bounded on one side by the Firth—are fruit and flower blossoms, clover, and, if suitable weather, a little heather-honey from the moors a couple of miles distant.

The second reason of my writing is to obtain your opinion on the jute cloths enclosed, especially the very thick wefted cloth, which, 18 in. by 18 in., double thickness, as shown, is intended to be used as bee-quilts over, possibly, the first felt wrap. I bring this to your notice, because I know that this jute square makes a warm, porous, and at the same time very cheap wrap as compared with others (an 18 in. by 18 in. square double-cloth would cost 3d. at most). The other samples show jute cloth in two or three grades of openness and thickness. Do you think that two or more sheets of any of the specimens would be more suitable than one of the heavy cloth?

I am surprised that for all the jute goods—cloth-bags, cord, twine, rope, etc., that must be used by the larger bee-keepers—there is no advertiser of these articles in your papers. I shall look forward to your reply, and be very pleased to get your advice.—R. N. R., Tayport, N.B.

[The best advice we can give, in your interest, is that you select from our advertising pages, names of a few leading appliance dealers and send to each a few samples of jute cloths, similar to those enclosed with your letter to us. They would be better able than anyone to say if your samples would be suitable for trade purposes. The cloth sent will, in our opinion, require something of more smooth surface next to the tops of frames.—EDS.]

BINDING THE BEE JOURNAL.

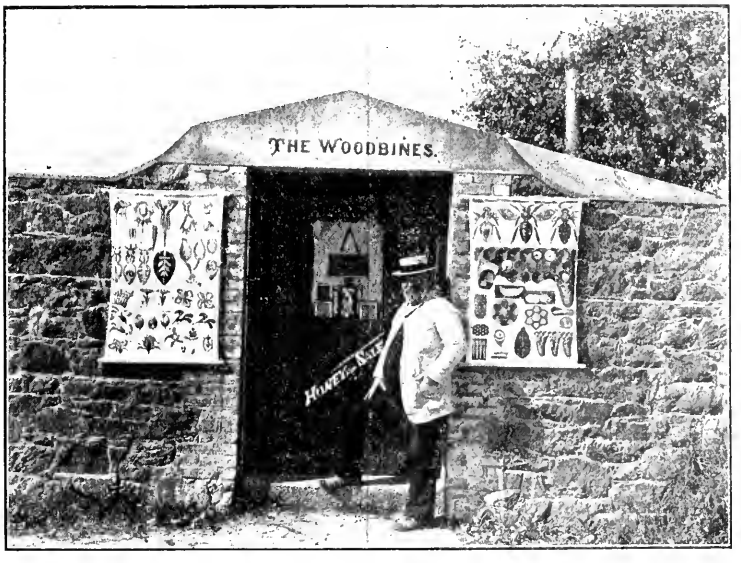
[6193.] A correspondent who writes in your issue of last week (6180, page 34) has some suggestions on the above subject which are useful. May I say that I have bound my copies in a similar way during the nine years I have been a subscriber. I think, however, that my method is an improvement on that of your correspondent, who suggests binding "six months' numbers" together. This would mean that every other volume would have no index. My plan is to remove all the advertisement pages (which are not numbered), and then to bind the whole year's numbers in one volume, which will be only one inch thick, and will have an index for the whole of the contents.

Readers who do their own binding will find the following plan simplify the task:—Place the numbers in regular order, taking care that loose pages go well to the back; putting them between two pieces of board, leaving about ½ in. protruding on the side where the holes are to be pierced. Place the boards in a carpenter's vice, or letter-copying press, and screw up tightly, then pierce the holes with bradawl and run the string through. A fine sacking-

needle will expedite the latter operation. If the string is securely tied your volume will be firm and book-like. A piece of strong brown paper and a little glue will make a cover if desired.—W. H. BRILLEY, Herefordshire.

HOW I MAKE A MARKET FOR HONEY.

[6194.] Herewith I send for your inspection a photo illustrating my method of displaying my honey for sale. The doorway shown opens into my garden, and the path which leads up to the main entrance of my house. In the door—as seen in photo—I have cut out a centre panel and fitted the opening with a square of glass. Behind this is fixed a shelf, upon which rests a "Quaker-oat" box, the latter being lined with snow-white paper, and displayed therein may be seen a couple of well-finished sections of good comb-honey; between these is a bell-glass beautifully worked out with sealed honey in comb, also a 1-lb. tie-over glass jar of extracted honey. The card hung up inside the box simply states that the honey is guaranteed to be pure and of heather blend. On each side of the door is hung one of the B.B.K.A. diagrams, as seen. These form an attraction which few passers-by can resist stopping to admire, and as the doorway fronts on to the main road between St. Aubins, St. Brelades, and Portlett Bays thus I capture the attention of thousands of visitors during the summer, and dispose of my honey to hundreds of visitors, who take it home to eat at their leisure, many to write for more to be sent on to all parts of the British Isles. This we know by the address we send it to by parcels post. It is no uncommon occurrence to see a dozen visitors at once standing round; at such times yours truly is making hay while the sun shines; and instead of troubling the middleman to sell it for me, I find, so far, after two seasons, I have myself to hunt round and buy. I have no difficulty in obtaining 1s. 2d. each for well-filled sections, and seldom have any under 1s. 1d. when laced up and glazed, *à la* Woodley. Run honey I sell at 1s. 1d in all tie-overs. I return the 1d. if the customer returns me the empty pot, but up to writing this have not had two dozen empties back. It is evident to me that when I adopted this method of showing I did a good day's work, and I can strongly recommend it to anyone else who has good honey for sale. I am wintering thirteen stocks, and intend to increase to twenty-five. I make all my own hives on the "W.B.C." principle, ten standard frames in the brood-box, only Abbott's broad-shoulder frames used (nothing better wanted) flat, sloping roof, and all covered with a sheet of iron, galvanised corrugated (24 gauge); these cost me 8d each. I saw them to length myself out of new, clean, and long sheets. Any bee-keeper who adopts this covering will be well satisfied, and can rest content that everything below will be dry. I conclude



MAKING A MARKET FOR HONEY.

with best wishes to all interested in "the bees."—W. W. Kay, St. Brelades, Jersey, January 25.

Queries and Replies.

[3198.] *Full Sheets or Starters in Frame-hive.*—Will you please answer the following in B.B.J.?—1. Am I obliged to use full sheets of foundation in frames for brood-nest? I should like to use strips (or "starters") only, as it would make a big difference in the amount of foundation required for a dozen hives. On the other hand, would the bees build too much drone-comb from starters only? 2. After receiving a swarm from seller, should I do wrong by starving the bees for thirty hours before putting them in hives with the object of stopping all chance of risk from foul-brood germs coming with the swarm? 3. How long a time should elapse after putting a swarm in a frame-hive, with good weather, before giving a rack of sections, supposing weather to be good? I send name and address for reference.—Cautious, Biddenden, Kent, January 20.

Reply.—1. It is generally thought in this country that the use of full sheets of foundation for swarms, when first hived, is true economy, because of the time saved to the bees just when the honey-flow is on. And this argument is not easily refuted, seeing how easily a good swarm could store honey greatly in excess (so far as value) of the cost of foundation used. You could easily test the merits or demerits of the two plans by trial with two swarms, one with full sheets and the other with starters. Personally, we prefer full sheets, and this is the view of the great majority of practical bee-men. No doubt a great deal too much drone-comb would be found in frames if starters only are used. 2. Yes, very wrong; do not try it. 3. All depends on the way honey comes in. There is no fixed number of days before supering; the time is chosen according to the bees' needs—i.e., if brood-chamber is well filled with bees, and honey comes in well, give supers at once.

[3199.] *Swarm in Owl's Nest.*—Can you tell me what has brought about the beheading, and disembowelling of the bees I enclose? They are part of a stray swarm which took possession of an owl's nest last summer, and although I provided them with shelter in the autumn, they had almost no stores, and are now all dead from want of food, I suppose. Many of the bodies in same condition as those enclosed were cast out of the improvised "hive," and the rest lay in a mass on the bottom, but all attacked in the same way. Thanking you in advance — R. J. W., Ripley, Surrey, January 22.

Reply.—Judging by the appearance of dead bees sent, it seems probable that the unfortunate insects, being unable to defend themselves—owing to their weak condition through want of food—were mutilated and partly eaten either by owls or other bee-enemies. We are not clear as to what is meant by "providing them with shelter in the autumn," as stated, so that the bees may have died from famine before the bodies were mutilated and partly eaten.

[3200.] *Hive Entrance Blocked in January.*—Monday, January 22nd, being a fine day, I noticed that the bees at most of my hives were very active, only one stock being quiet. On looking at entrance of this hive, I found it stopped up with dead bees. I lost no time in removing these, and clearing the passage-way, when there was a rush out of live bees from the inside. These looked all right, but the dead were so numerous that I thought there could not be many left alive in the hive. On removing the covering of frames and looking at combs, I found that they contained any amount of food, and was, therefore, unable to understand the great mortality among the bees. I cleared out more than a half-pint of dead ones. To-day I examined the hive again, and drew many more out from the entrance, some of which I am forwarding for your opinion with regard to there being any disease? If not, what do you think can be the cause of so many deaths among the bees of this particular hive? Trusting I am not troubling you unduly,—"Newcastle," January 27.

Reply.—The probability is that a seam of bees has, by some means, parted from the cluster through the latter changing its position on the combs in order to get near the food supply, and has thus been cut off from the stores during cold weather to perish through hunger, with plenty of food almost within reach. This happens not infrequently in severe winters, and renders it necessary to keep hive entrances clear of dead bees at regular intervals, to avoid the risk of harm to the live bees unable to leave the hive. Your best course will be to clear the floor-board at the first opportunity, and, if possible, examine the combs in order to gauge the extent of the mischief.

[3201.] *General Management of Bees.*—I have three stocks of bees headed by queens of 1905, 1904, and 1903 respectively. I also have three new hives (bee-less), besides one I intend to keep for emergencies. I am

considering what will be the best way of dealing with them in the coming season, and should be grateful for your advice.—F. G. L., Sawley.

REPLY.—Your best course will be to read the concluding chapter in the "Guide Book" on "General Management" (pages 168 to 172), and arrange plans according to your own time and ability to carry out the directions and various methods fully detailed in other chapters of Mr. Cowan's work. No item of ordinary bee-management is left undealt with so far as regards increasing stocks or looking for the best results in surplus-honey, so that with the book as a guide you will have fuller details than we could possibly give in the form of replies to queries without any knowledge of your previous experience or surroundings.

[3202.] *Moving Bees in February.*—I will be much obliged if you will kindly tell me how best to move my eleven hives of bees into a straight line, and how far apart each hive ought to be. I would like to know what is the least distance that is advised between hives, as my space is limited. At present they are dotted about, but I wish to have them all in line. Is it safe to move each hive a few feet every day until they come right, and is now the time to do it?—C. S. S. Weymouth.

REPLY.—If the distance apart is not great the hives may be safely moved three or four feet each day on which the bees are flying freely. With regard to distance apart at which hives should stand, if room allows, it is advisable to have six feet between each, and anything less than this is more or less a disadvantage, though many bee-keepers are perforce compelled to have their hives closer for lack of room. The sooner the change of position is made the better.

[3203.] *Bees near Fowl Run.*—I should be glad if you would let me know, through the medium of your "Queries" column, whether it is safe to have bee-hives in close proximity to a fowl-run, or whether the bees would be likely to molest or disturb the fowls.

I send a rough diagram of the space at my disposal for a fowl-run, and where I want, if possible, to keep my two bee-hives. As I propose arranging it, the fowls would be able to approach to within about a couple of feet from the hives. Would it be better to board up the lower part of the wire netting I have indicated, so as to induce the bees to fly over the heads of the fowls, or is there no fear of the latter catching and eating bees? The circumstances of its environment made it impossible to place the bees in any other part of the ground. Thanking you in anticipation for your advice.—E. K. H., Brondesbury Park, N.W., January 28.

REPLY.—There is always an element of risk in locating bee-hives close to fowl-runs, but the danger is to the fowls, rather than the bees. Judging from the rough sketch sent, we should place the hives so that the line of flight would be facing the open country and away from the fowl-run. Then, if a light lattice-work fence was substituted for the wire netting marked on sketch, you might have a row of runner beans trained up the fence eight or nine feet high. And this would tend to minimise the risk of the bees attacking the fowls at certain seasons. Much, however, depends on the bee-keeper and his methods of management for keeping fowls and bees apart, and without any mischief following.

[3204.] *The Ford-Wells Hive.*—I should be glad of your advice as to how I am to manage a "Wells" hive, which I bought second-hand in the autumn. I understand about keeping two stocks in the hive with a perforated division, but (1) should there not be a floor-board under the brood frames, and therefore *over* the shallow-frames below? Outside there are, in this hive, two sets of entrances, one to the brood chamber, and one to the shallow frames. The back of the hive opens for the lower half, so that the shallow frames can be withdrawn *en masse*, as in a bottomless drawer. (2) Should there be a moveable floor-board between the two sets of frames, B. and S.? and (3) should it, in the honey season, be of perforated queen-excluding zinc, like that over the brood combs? I think it is a Taylor's Wells hive.—DRALLOP.

REPLY.—From description given it is plain that the hive referred to is that known as the "Ford-Wells" hive, a full description of which, along with the method of working, appears in the maker's catalogue, which we advise you to write for. The address is Mr. E. H. Taylor, Welwyn, Herts.

[3205.] *Bee-candy Making.*—I should much like to have your opinion on the enclosed soft candy, made according to Br. Colomban's recipe. I have boiled it for a much longer period than that mentioned in the receipt, but it does not seem to be yet quite hard enough. I may say the honey used was of a dark colour, and perhaps not quite "ripe."—BASIL E. BUCKWELL, Acton, W., January 17.

REPLY.—Except for being a little coarse in grain, your sample will answer very well as bee-food, though it bears evidence, we think, of the directions given by Br. Colomban not having been very carefully carried out. Did you boil it on a very brisk, hot fire? As this is essential if best results are to be secured.

[3206.] *Soft Bee-candy.* — Your correspondent, Br. Colomban, in the recipe which appears on page 563 of B.B.J. for September 14, 1905, gives a method for ascertaining when the syrup has been boiled enough, and adds: — "A sugar-boiling thermometer would be a convenient substitute." May I ask him to say: 1. In what manner? I can understand that the thermometer shows when the liquid is at boiling-point, but how does it show that it has boiled long enough? 2. Is the sugar-boiling thermometer of any particular make or pattern? Will not a bath thermometer answer as well?—S. E., Sandhurst, Kent, January 29.

REPLY.—As it will be more satisfactory if our correspondent, Br. Colomban, replies to the above, we will ask him to kindly send a line for next week's issue.

[3207.] *Hive Entrance in Centre of Floorboard.*—I thought of making floorboard and entrance to bee-hive as per enclosed sketch, the idea being to do away with entrance-porch, and still have a dry entrance, but before doing so would esteem it a favour if you would kindly say in next issue if you think it practicable. I have not seen anything of the sort advocated before in your paper, but would not be surprised if you say it had, and failed. — F. CORSEY, Oxford, January 23.

REPLY.—The idea of having hive-entrances beneath the floorboard is by no means new, but has never met with much success so far as regards its coming largely into use. We have known of several attempts at long intervals to introduce that style of entrance, but none have been adopted. The most recent and perhaps the best development of this type of hive was fully described in our issue of May 25 last year, and illustrated in the view of the apiary of the inventor of the hive in question on June 8 of same year.

Echoes from the Hives.

Broughty Ferry, Forfar, N.B., January 23.—My bees are now wintering well, but the worst weather in this part of the kingdom has yet to come. I have, however, great expectations for the season of 1906, if the summer is favourable, as the district in which I am situated is a very good one for bees. As a subscriber to the B.B.J., I can testify to the useful information I have received through its columns.—J. H. MCDONALD.

Rose Farm Apiary, Old Danesmoor, Chesterfield, January 29. We have had several beautiful days here for the bees, and they have enjoyed a good airing-flight. Yesterday (Sunday) being so exceptionally fine and warm that there was a continual hum in my apiary from nine in the morning till past four in the afternoon. Very few flowers were to be seen, but the bees spent a lot of time busily foraging among them. During the whole of January there have only been three days on which I have not seen a few bees out some part of the day. —TOM SLEIGHT.

Meadowbank, Torrance, N.B., January 22.—I gave all my hives a second cake of soft candy on January 19. Every stock looked strong in bees yesterday, Sunday being an exceedingly fine day, and they were on the wing, flying about in thousands for fully two hours, the hum of the bees being very pleasant to the ear, as it was to watch them busily visiting the water-troughs. Snowdrops are coming into bloom, which is very early in this district. —W. WATSON.

Hockerill, Bishop's Stortford.—January 16 was a fine day, the temperature in the shade at noon being 48° Fahr. All my hive doorways were black with bees, numbers of them flying high and strong—just as they do in spring. But we had heavy rain at night, though the minimum temperature did not fall below 44° Fahr. The following day was also fine and spring-like, the maximum temperature agin being 48° Fahr. I was glad to note the hives I have selected for queen rearing appear to be exceedingly strong; they are bred from a stock which gave me a swarm, 9lb., and the most honey.—G. C. BURGESS.

Notices to Correspondents & Inquirers.

AN AGRICULTURAL LABOURER (Wilts).—Defaulting Honey-buyers.—We trust that the advertiser of whom you very justly complain will have ere now made good his promise to pay. Anyway, your first experience will be sufficient, we hope, to ensure payment in the future by adopting our "deposit system" of payment, as it effectually secures both buyer and seller from loss.

DOUBTFUL (Yorks).—Pea-flour Candy.—Your sample (made in 1904, and re-made now by again boiling) would be of no use as bee-food.

A. SKIPPEN (Springfield).—Photos of Bee-gardens.—We will be glad to illustrate your apiary in "Homes of the Honey Bee" if a suitable photo is forwarded. Many thanks for your appreciation of the B.B.J.

A. HARDWELL (Eltham).—Bee Nomenclature.—The dead bee sent is not a worker, and its greater length than usual, which gave the impression of it being a queen, is due to abdominal distention. It is slightly crossed with a foreign strain of some kind, not sufficiently marked for safe definition.

Editorial, Notices, &c.

THE STANDARD FRAME QUESTION.

Our few remarks on page 41 last week dealing with the Standard frame question have, so far, brought but one reply, that from Mr. S. P. Soal (*vide* page 47 in this issue); and this reply is disappointing, as it only re-opens a phase of the discussion which we hoped had been settled long ago. It may be well, therefore, if we draw the attention of present-day readers to a point on which Mr. Soal lays special emphasis, *i.e.*, a trial of the frame he favours alongside the B.B.K.A. Standard, and his confidence that ultimate results will prove the superiority of a 16 in. by 10 in. frame, if bee-keepers can only be induced to make the experiment proposed.

Presuming that our friend intends us to include ourselves in the list of experimenters, we may say that the two sizes of frames had full trial at our hands more than twenty years ago, when, in our apiary of about forty hives, ten or twelve were exactly similar to Mr. C. N. Abbott's "Standard Hive" holding a 16 in. by 10 in. frame, which took the prize at the Palace Show in 1875. Moreover, the trial was made in full sympathy with the larger frame. Yet the final result convinced us that the B.B.K.A. Standard gave better results; consequently it was adopted, and the others weeded out.

For the rest, we may say that the "sample frame" promised by Mr. Soal will—along with all others sent—receive full consideration at the hands of the special committee, to whom will be entrusted the task of deciding on any change considered needful.

REVIEWS OF FOREIGN BEE-JOURNALS.

By "Nemo."

Quality of Honey for Gingerbread.—We find in *l'Apiculteur* a report of an interesting discussion which took place at the last meeting of the Central Bee-keepers' Society of France. M. R. Aubert wished to know, on the subject of import duties, whether the manufacturers of gingerbread did not use foreign honey. M. Rousseray stated that the manufacturers were not able to use either the coarse Chilian or European honeys. The French white honeys are absolutely of no use for making honey-cakes, as with them the dough does not rise. The honey produced in Brittany is indispensable for the purpose, and is used by manufacturers. An increase in the import duty would not affect the sale of white honey which could only be increased by bringing it more prominently before the public and making known its advantages, as is done in England, where honey figures at five-o'clock teas, and on other occasions. Nothing is done in this way in France.

In the same journal there also appears a complaint that honey is slow in granulating this season, and in reply thereto the editor states that the mystery respecting granulation has not yet been solved. The moisture of the atmosphere has had considerable influence, as honey is hygrometric. But whatever may be the cause, we can always resort to the classical methods of producing granulation, by beating the honey, changing it from one vessel to another, and adding a little granulated honey to it, while keeping it in a very dry and not too cold a place.

Fifty Years of Bee-Keeping in France.—From *l'Apiculteur*, we learn that it is just fifty years since the Société Centrale d'Apiculture was founded by M. Hamet. It was in 1856 that this pioneer of apicultural journalism started *l'Apiculteur* at the same time as the society was formed, but it then went by the name of *l'Apiculteur Practicien*. The journal has appeared monthly ever since, and on the death of M. Hamet the editorship was taken up by M. Sevalle. The former editor, M. Hamet, was a strenuous opponent of the movable comb-hive and extractor, but since M. Sevalle has taken charge of the journal, free scope has been given for discussion, with the result that the movable-comb system has made great advances in France. The journal is now the best in the French language, and has a good staff of contributors.

German Bee-Papers.—There is no country in the world which can boast of so many bee-papers as Germany. We now, however, have to announce that two have ceased their independent existence, and been amalgamated with the *Deutsche Illustrierte Bienenzeitung*. One is the *Imkerschule*, edited for 15 years by Pastor E. Weygundt, and the other, the *Deutsche Bienenfreund*, which has existed for 41 years, and was edited by Kantor L. Kraucher. Both of these gentlemen have joined the staff, so that the *Illustrierte Bienenzeitung* will be the gainer.

The Sale of Honey in Germany.—From the *Munchener Bienenzeitung* we learn what a small proportion is the sale of honey in comparison with other articles of food. In the organ of the Board of Health, it is stated that in 1900 there were 2,605,350 hives of bees in Germany, which produced 149,501 double centals of honey. Of this, 3,218 was exported, and in this way there remained 146,283, in addition to which the amount imported was 19,117 centals. Therefore during this year only 165,400 double centals were consumed by the German people. Taking the kilo at two marks would produce 33,080,000 marks.

Distributed over the population of 56,367,178, the result is that there is a consumption of 293½ grammes or 58 2-3rd pounds per head during the year. This gives an average for every German of 4-5ths of a gramme of honey per day—a ridiculously small amount compared, for instance, with alcohol. There is no money to spend on such a healthy food as honey, yet as regards its nourishing value, it is cheaper than meat or milk.

Buckwheat Honey for Gingerbread.—We read in *Le Miel* an interesting article by M. R. Piot on the use of honey in the manufacture of gingerbread. He says white honey is no use in making gingerbread, and honey from Brittany is the only one used in France for the purpose. This is exclusively buckwheat honey, very dark, thick, rich, strong flavoured, and in cold weather it can be cut with a spade. This honey has a characteristic flavour so pronounced as to make it unsuitable for table use, but rendering it just the thing for manufacturing gingerbread. The reason why Dijon has become the centre for the manufacture of gingerbread is rather interesting. It came originally from Flanders, and it appears that when Philip the Good married he was anxious, in order to accustom his wife to her new surroundings, to proceed by gradual transition and make as few changes as possible in her habits and tastes. He, therefore, brought with him from Flanders a cook who knew how to make a special kind of cake of which the duchess was very fond, and this cake was simply honey-gingerbread. Imitators soon appeared and they started shops for the sale of the gingerbread, and in this way the industry was established in Dijon. The town of Dijon now, in this manufacture alone consumes annually from 900 to 1,000 barrels of honey, each barrel weighing 600 lb., making a total of 60,000 lb. of honey used for making gingerbread alone. The industry is so dependent on buckwheat honey that when it is scarce they will pay a high price for it, and have given as much as 110 francs the 100 kilos, or thirty to forty francs more than white honey was selling for. The principal quality of buckwheat honey is that the dough rises with it and remains light, whereas with other honey after rising it again sinks and causes the cakes to be heavy.

Remarkable Honey Cure. — We find reported in the *Schweizerische Bienenzeitung*, a case showing the efficacy and medicinal value of honey. A young woman was suffering from a very severe form of anæmia, and the eminent Dr. K—— at last told her that nothing more could be done for her, and that she could not live long, but without holding out much hope of her recovery, he recommended her to try honey and milk. She was to take this several times a day, and take walks in the woods so long as she was strong enough to do so. She carried out his advice, and in a few months became perfectly well and strong again. This is an example where honey has been the means of rescuing a life from the grave, and should be an incentive to the more liberal use of honey as an article of food.

Correspondence.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

*Communications relating to the literary department, reports of Associations, Shows, Meetings, Echoes, Queries, Books for Review, &c., must be addressed only to "*THE EDITORS of the 'British Bee Journal,' 8, *Henrietta-street, Covent Garden, London, W.C." All business communications relating to advertisements, &c., must be addressed to '*THE MANAGER, 'British Bee Journal' *Office*, 8, *Henrietta-street, Covent Garden, London, W.C.*

AMONG THE BEES.

AS LIKE AS TWO BEES.

[6195.] "As like as two peas" has become a proverb and most bee-keepers believe that the similarity of bees is so great that my heading might be considered as synonymous. This is, however, far from being true in even a limited sense.

Examine minutely twenty queens, and anyone familiar with bees will at once detect certain points wherein they differ. One is darker, one is fairer, one is larger, one is smaller, one is stouter, one is thinner, one is bright and active, while another is sluggish in her movements. Tempers and temperaments will also be found to differ. One has her facial expression different from another. In character and disposition they will be found to vary if carefully studied. One goes quietly on ovipositing while you examine the comb on which she is working; another looks as if she had been struck dumb and stands motionless with either fear or wonder. Then, a third, shy and reserved, elusively shuns your view and hastily retires to escape observation. One scampers away whenever you open the hive, another goes quietly on accepting the love-offering from the proboscis of the loving attendants, placid and peaceful, as if it were an every day occurrence, she quietly feasts away oblivious of the prying eyes so intently watching her movements. Do not we all know—too frequently to our cost— how one queen differs from another in prolificness; how one can lay her thousands of eggs, while another can lay her tens of thousands.

How can one force the pace and fill every cell in every frame of the brood-body during the active breeding season. In this way she compels the bees to store surplus-honey in supers, while her full sister, it may be, lags far in the rear only half filling the limited number of frames which her cautious owner gives her progeny to form their home. If variety is the very spice of life, we have it here in no stinted measure.

Those "lazy, yawning drones" have many points of dissimilarity. Take a number of them and you find them varying in size from about the bulk of an ordinary bee up to nearly twice that size. Look at their movements. How slow one is in every motion. How stately, if stolidly, he stalks along; how drowsily is another's every movement; how alert and active is a third; how stupidly one looks about him as if the world concerned him not; how brightly intent another watches perhaps for the great event of his life. Study their flight and you note a diversity even in the intensity of their droning hum—varying from dull and sonorous ,heavy and monotonous, up to sharp and shrill, and brightly tuneful. One merely floats along on the liquid ether, another wings its way briskly, yet purposeless, in wavy spirals, while yet a third darts away like an arrow, as if he had a purpose in life and meant to fulfil it.

When the mandate has gone forth that the period for eviction has arrived how tenaciously some of them cling to life, persistently returning to the hive time after time, while others calmly await their fate and yield unmurmuringly. A few will make as much buzzing and fuss as if the fate of the hive depended upon them alone. Again, look at the drone's magnificent compound eyes. I confess to a feeling of wonder and awe every time I look closely into their profound depths. And you see, or fancy you see there, differences in size, shape, colour, depth, and mobility. No two seem to me to be quite similar in every respect, and I read a different tale almost every time I gaze into their placid depths. The eye of a toad and a drone fascinates me as that of no other small creature does.

But someone says:—"The worker-bees are all alike." Not at all! Diversity is here unending, and every hive and perhaps every bee therein has some characteristic virtue or failing peculiar to itself. Every bee-man knows that almost every hive he opens has peculiarities of its own, differing according to time and seasons, however. All colonies are not equally vicious; nor are all bees in an ill-tempered colony equally ireful. Not one in a hundred, possibly, makes a rush at the operator; another small percentage endeavours to intimidate him with noise and fuss; but, even in a bad case the vast majority ignore his presence. Then, are bees' working powers all quite similar? How thankful we would all be if our worst could be whipped up to do work equivalent to the best. But, alas! how many laggards fall behind in the race. How very many just miss the mark and fail to come up to expectations. Again, open a score of hives in spring, and I venture to say no two will behave just alike. Some will act as if they loved manipulations. Others will display just a minimum of crossness occasionally, while their nearest neighbours may give you a gentle foretaste of purgatory. How often do we find differences in finish and capping of combs from the progeny of even the same mother. Not less frequently does diversity display itself originated from the other side of the family tree. The industry of certain strains is most marked. Compare three colonies, to all apearances equally populous, and we find results differing, as Bonus, Melior, Optimus, as old Butler would say. Even in their stinging power bees differ considerably. Some do the deed as if their very bodies were impregnated with the vitriolic venom, and as if their whole frame were one huge poison-sac. Their ire and animus give an intensity and energy to the penetrative powers of the sting which leaves abnormal effects even in a hardened operator. Ordinary stinging is a mere pin prick compared with it. Thank goodness, bees differ from bees in a hundred different ways.—D. M. M., Banff.

APICULTURAL NOTES.

ARE OUT-APIARIES ADVANTAGEOUS?

[6196.] The winter, so far, has been favourable for bees. They have had sufficient flights to keep them healthy, and there has been enough mild weather to enable them to move from one part of the hive to another and thus keep in touch with stores. A slight examination of my hives, made a few days ago by merely turning up one corner of quilts, made it clear that strong stocks, packed up with plenty of provisions in the autumn, are still strong in bees and do not appear to have made any unusual inroads on their stores. But nuclei and small lots of driven bees, which I am wintering mainly for the sake of the young queens with which they are headed, appear to vary very much, so far as regards food supplies; some have plenty, while others are running desperately short, these latter undoubtedly kept on breeding till very late in the season, and thus used up stores which would otherwise have been reserved for future use. It is, of course, too early for making anything beyond a superficial examination of a hive's condition, but where I found the slightest indication of food being short a supply has been given, consisting of a cake of candy

and a section of honey laid flat on the top-bars. This will tide them over to the time when syrup is the most suitable food.

In his "Notes by the Way," on February 1 (page 41), Mr. Woodley raises the question of the advantages or otherwise of one large apiary being more profitable than a number of smaller ones, and in dealing with the subject quotes article from *Gleanings*, by Mr. Alexander, an American bee-keeper who has 750 stocks in one yard, and finds it more profitable to do so than if they were kept in several apiaries a few miles apart. Then Mr. W. goes on to say that the experience of Mr. Alexander may be considered as applicable to this country. I do not pretend to know very much about America—not having had time to go over the pond yet—so we will take it for granted that Mr. Alexander is correct in his view, so far as he and America are concerned. But I doubt very much whether Mr. Woodley is right in saying that the plan is applicable to this country. I am acquainted with some very good honey-producing districts, but have not yet seen the spot where I dare risk an apiary one quarter of 750 stocks. Having several out-apiaries myself, my principle is not to put more than fifty stocks in one place, and I prefer my hives to be as far from any others as is practically and conveniently possible. I purpose increasing my number of stocks this year, but rather than add to my already established apiaries I am setting up an additional one in a new locality, and if I had 750 stocks I should rather locate them in fifteen apiaries than one. No doubt a considerable amount of time and trouble would be involved in getting from place to place. But there is nothing—in bee-keeping, at all events—without labour, and I think the advantage accruing from the extra number of apiaries would more than counterbalance the extra trouble and expense involved. I have frequently noticed that bees in one district will be doing well, while stocks located only a few miles away are practically doing nothing, although both localities appear equally good for bee-forage. I have noticed, too, that, as a rule, the fewer stocks kept in one place the better are the proportionate returns. This may be partly accounted for by the fact that a few hives often receive better attention than a larger number. But I cannot accept this as completely accounting for the difference. When one thinks of an apiary of, say, fifty stocks doing well, it is difficult to view with favour the idea that if fourteen other apiaries of similar size were "dumped" down on the same spot all would do equally well. It may be admitted that in most districts a considerable quantity of honey is left ungathered, just at the time when there is a big flow on. But it is when honey is coming in sparingly (i.e., the building-up period) that the large number of stocks are at a disadvantage compared with the smaller number.

There is also the question of disease to be considered, and the need for keeping down the swarming fever, preventing robbing, etc., etc., all of which are difficult to deal with at the best, and the larger the apiary the greater the difficulty—all things counted. It therefore seems to me that the man who has several apiaries a reasonable distance apart has more strings to his bow, and stands a better chance of success than the man who has 750 stocks in one place. A great deal more might be said, but I fear I have already made my letter too long. The subject, however, is a very important one, and it would be interesting and no doubt beneficial too, if those who have had experience in the matter would give us their view on the subject. — ALLEN SHARP, Brampton, Huntingdon.

FEEDING BEES IN SPRING.

[6197.] May I venture to ask the opinion of some of our experienced bee-men on the subject of spring feeding? I have a vague notion that your correspondent, "D. M. M.," once wrote that he was not accustomed to feed his bees in spring. I am myself not thoroughly convinced that it is always a good thing. Of course, stocks which are short of stores must be fed; there can be no doubt about that; but when a stock has sufficient honey to carry it through the flowerless months, is it better to feed or not? I have not experimented sufficiently to give a decided answer, but two stocks which I have not fed the last two years have done as well, or even better, than my other stocks. Would some of your readers give their experience? We are having an extraordinarily mild season here. I have been waiting for an opportunity to move three hives which I hoped to have during the cold weather, but the bees have flown at least once every week this winter. This means a great consumption of stores. The bees have also been carrying water home the whole winter, except a part of November.—S. D., Charing, Kent, January 30,

("*Correspondence*" *continued on page* 56.)

HOMES OF THE HONEY BEE.

THE APIARIES OF OUR READERS.

The exceedingly "plain English" in which Mr. Drew—seen in his apiary on next page — gives advice to beginners in bee-keeping on the subject of foul brood, evidently expresses the convictions arrived at from bitter personal experience, and, as such, it will be valued by our readers. For

the rest, his useful "notes" read as follows:—

I send you with pleasure a few notes to go with photo of my out-apiary, which was taken some time ago. Only a few of my hives are shown, as they cover a large piece of ground. The two acres of freehold on which they stand were purchased entirely with profit from bees and honey sold. I may say that only swarms and stocks are allowed to have a "look-in" so far as regards my apiary. Driven lots and foreign bees I won't deal with at any price; my experience with that class of stock is anything but profitable. Foreign bees I have had from our best dealers and paid a big price for them, yet after years of work and worry, foul-brood and "spring-dwindling" is the best character that I can give them. A good strain of our native bees is, to my mind, the best for comb-honey production on the bleak chalk hills of Hampshire, and if they are packed down on 10 standard frames of honey in the autumn they very seldom want spring feeding; nothing more needed than uncapping a few cells once a week. You can get in this way stocks in working order and ready for sections by the time the whitethorn is in bloom in May; after that comes the sainfoin for a few days, but that is all cut for hay before it is in full bloom. After that we have white clover and the wild flowers on the downs in abundance, and finish up with a little heather. My average "take" is from 40 to 50 sections per stock, but the hive shown in photo with section-rack on top yielded me 168 first-class sections in 1900. On several occasions I have taken over 100 sections from a single hive. I find that a showery season suits us best here, as we get more of the white clover bloom, and it lasts much longer in flower than in a dry season. I keep about 45 hives for comb-honey, which is all bespoke before the season opens, a fact which speaks well for quality. I also run a few hives for queen-rearing. My success is due entirely to the BEE JOURNAL (which I have taken for years), and to the "Guide Book." I have also attended lectures given by secretary of Hants and Isle of Wight Bee-Keepers' Association (Mr. E. H. Bellairs). I have taken my share of prizes at most of our leading agricultural shows, but our sections are apt to granulate before the autumn, so I cannot get a chance at later shows. My advice to beginners is, start with June swarms; shun "driven" and foreign bees and second-hand appliances as a pestilence, or in a few years foul brood will get a footing. If one of my stocks shows the slightest suspicious sign about the brood the bees are smothered, and hive, honey, and all the lot is burnt! I make a clean sweep of them, and it saves a deal of trouble. If all bee-keepers were to do the same for a few years, foul brood would soon be stamped out; half-hearted measures are no use to one who keeps bees for profit, prizes, and pleasure. I hope the season of 1906 may be profitable to all bee-keepers."

MR. W. DREW'S APIARY, SAINT CROSS, WINCHESTER, HAMPSHIRE.

CORRESPONDENCE.

(*Continued from page* 54.)

MAKING BEE CANDY.

HOW TO USE A THERMOMETER.

[6198.] In reference to the inquiry of your correspondent "S. E.," last week (page 50), as I was the first to write about use of thermometer in sugar-boiling (and could get no information from our Editor, but have ferreted it out otherwise), I would say that, of course, a different boiling point attaches to various substances. Alcohol boils at 173°, water, as is known, at 212°, sugar, etc., to make "toffy" needs over 300°. If sugar and water, etc., as per recipe in "Guide Book," are boiled for candy, I think it will be found that when about 235° is reached in the boiling, the consistency will be correct, and that the candy will prove first-class, provided, of course, that the mixture is stirred till it begins to thicken before pouring out. A suitable thermometer of German make can be bought for 2s. 6d.—the scale going to over 300°—or a regular sugar-boiler's one in a copper frame may be had for 6s. I bought one of the former at a maker's in a street off Hatton Garden, which answers the desired purpose—and no doubt similar ones are to be had from those who deal in such articles in any large town.—ALIQUIS, February 3.

[6199.] Referring to the queries of your correspondent, "S. E., Sandhurst" (3206, page 50), I may say that a bath thermometer will not answer at all. The sugar-boiling thermometer, as the name indicates, is a special thermometer graduated to 300° Fahr., and protected by a cylindrical brass case. In the price list of Negretti and Zambra (Holborn Viaduct, London, E.C.), it is the No. 34. It will be well for "S. E." to remember that the boiling point is not the maximum degree of heat to which a liquid can be brought. This being understood, the proper thermometer indicates the degrees of heat *above* as well as *below* the boiling point. The way of using the implement is to hang it in the boiling sugar, and note the rise of the mercury. Sugar can be boiled to about 285° Fahr. without burning, but I cannot say exactly to what degree it has to be boiled for the bee candy, as I have not used any thermometer for many years, the one I used twenty years ago being graduated differently from those that are made in this country.

Referring to the query of Basil E. Buckwell (3205, page 49), I should like to say that unripe or very liquid honey would have naturally to be boiled a little longer. I would advise him, however, to make use of good honey, as this may have a certain influence on the smoothness of candy. I always use my best clover honey for the purpose.—BR. COLOMBAN, Buckfast, February 3.

BEE PARALYSIS.

IS ITS CAUSE KNOWN?

[6200.] Now that this disease is coming more into notice, I should like to add a few words to what has already been written. The symptoms described by Mr. C. Reed (6190, page 44), are much the same as I have found them, the only difference being perhaps, that the abdomen of the affected bee is not distended in every case, while the wings are often twisted back, having the appearance of being dislocated. During a bright, sunny day, recently, the bees on coming out of the hive dropped on to the grass by the dozen, and seemed quite powerless, so far as using their wings. They kept crawling up the blades of grass and on to the alighting-board only to tumble off again, and when the sun went down, and the day became colder, the bees collected in little bunches of a dozen or so in each, and soon perished. Another hive since becoming affected with paralysis has developed dysentery, and the bees are rapidly dwindling.

Has anyone yet found out whether paralysis itself kills the bees, or if it is only the exposure outside when they are unable to return to the hive? If the latter suggestion is correct, the "Claustral Detention Chamber" would be a great help while treatment with medicated syrup, etc., is proceeding. But before we can do much in the way of treatment, we want to know more concerning the cause (in this neighbourhood we are too well acquainted with the effect), and spread of the disease; we shall then be better able to deal with its prevention and cure. Our Editors say that it is more prevalent in warmer climates than ours; such being the case, no doubt the recent mild winters have had something to do with its spreading. Is some form of bacilli at the bottom of the mischief? If so, has anyone yet discovered the disinfectant best adapted to destroy it? So far as I can see, naphthol beta and naphthaline are useless as remedies, for one stock, fed entirely on medicated syrup during last summer, has since succumbed. I feel quite sure that it is infectious, as a colony in my apiary noted for their robbing propensities, got at a diseased hive one day while I was away, carrying off a few pounds of stores, and about three weeks later were crawling on the grass in front of the hive by the dozen. Is there any bacteriologist willing, for the

good of bee-keepers in general, to take the matter up and study it? If so, I shall be pleased to post him any information I can glean on the subject, also any dead or diseased bees, comb or honey, etc.—H. M. Cooper, Thorley, Isle of Wight.

[We believe it is admitted on all sides that no reliable cure for bee paralysis has yet been discovered; nor has either naphthol beta or naphthaline ever been suggested as remedies for that disease. Many supposed cures have been published, among them that reprinted in our pages on January 4 last, and numerous articles have appeared in American bee journals last year dealing with the subject, but none give very encouraging results. We propose, however, to look them over, and if any are found applicable to the case in this country, and likely to be of use, it may be deemed advisable to reprint particulars in an early issue.—Eds.]

THE STANDARD FRAME.

[6201.] The question of altering and improving the standard frame being now to the fore, and bee-men asked to express their views thereon, may I earnestly beg the committee of the B.B.K.A. to thoroughly reconsider the whole matter? Not merely minor variations, as the thickness and width of the top-bar, etc. (about which there will probably always be differences of opinion), but the size also, which is far and away the most important point pertaining to the frames of a hive.

Without depreciating in the slightest degree the good the B.B.K.A. has done to the bee-industry in this country, foremost among which I would gratefully mention the support given to "our journal" (so pluckily initiated by the late Mr. C. N. Abbott) and the encouragement of shows, which has done a great deal towards placing British honey on the market, and educating the British public to an appreciation of its good qualities, I must nevertheless record my conviction that when, some thirty years ago, the B.B.K.A. decided on adopting the frame which has since been so largely used, they did so without adequate experimental knowledge of the two principal sizes of frames then in use, viz., the Woodbury, which is nearly the present standard, and the 16in. by 10in. frame.

It is especially noteworthy that Mr. C. N. Abbott advocated the larger frame, and he was unquestionably one of the most advanced and practical bee-keepers of his time; not only so, but Mr. Samuel Simmins—than whom there is not a more experienced "bee-man" in England to day—after using both sizes of frames in the same apairy for thirty years, still unhesitatingly gives his opinion in favour of the 16in. by 10in. frame.

What *ought* to have been done, and what I most earnestly hope will now be done by the B.B.K.A. is the establishment of an experimental apiary of, say, fifty hives, half of them to be worked with the present standard and the other half with 16in. by 10in. frames with $\frac{7}{8}$in. thick top-bar. The apiary to be located in a good honey district, and managed by a capable bee-keeper for, say, five years, both sides of hives to be treated fairly, i.e., to be worked for "all they are worth." On no acount should a "touring" expert be employed to manage the hives, as he would be away, looking after other people's bees, at the very times when the apiary would need most attention.

This being done, the association would be in a somewhat better position to judge of the relative advantages of the two sizes of frames, and also of the two thicknesses of top-bars.

Our Editors are sorely afraid that the adoption of a different sized frame as the standard would cause a great upset. No doubt it would, to a certain extent; but in this connection I would point out that precisely the same fear was expressed when our present standard was first mooted. Much hardship, especially to hive-makers, was predicted; but, singularly enough, once the size was fixed we never heard any more about it!

I am sending a sample frame for consideration by the B.B.K.A. It is a modification of Simmins's "Commercial." The dimensions (every one of which is guaranteed correct to the hundredth part of an inch) are as follows: — Length 16in., depth 10in., top-bar, 19in. by $\frac{7}{8}$in. by $\frac{7}{8}$in. (lugs $\frac{3}{8}$in.), two winter passages cut through top-bar, 1in. by 5-16in., ends $\frac{7}{8}$in. by $\frac{3}{8}$in., bottom-rail $\frac{7}{8}$in. by $\frac{1}{4}$in. The sample frame (as when sent out) is *square*, and "*clear of twist*," two important points, which, I fancy, are quite neglected by the average bee-keeper.

In conclusion, I venture to hope the B.B.K.A. will give the above suggestion their careful consideration. — Saml. P. Soal, Rochford, Essex, February 5, 1906.

[We venture to remind our correspondent that Mr. C. N. Abbott acquiesced in the decision arrived at by the committee appointed to consider the question of a standard frame.—Eds.]

BIG "TAKES OF HONEY."

[6202.] Many times during the season —and out of the season, too, for the matter of that — we read in the B.B.J. of big "takes" of honey. The latest to come under my notice is from our friend

"R. N. R.," Tayport, on page 46, of last week's journal, who took 114lb. of surplus honey from one hive. Without in the least degree wishing to discredit his statement, it makes me wonder, as I often do, what is called "surplus" honey? May be it is that the brood-chamber is robbed to the full extent of all the honey it contains, and the bees fed-up with syrup. If such is the case, probably that accounts for such big weights of surplus. For my own part, I prefer to leave the bees their natural stores, a plan which seems to me must be best. I confess to being only a novice at the craft, but I have never had any "takes" approach 100lb. It may, of course, be possible for me to secure better results in the near future, for I am not very well fixed up for successful bee-keeping. Between my bees and myself there are some fifty miles and I can only visit them them about three times yearly. In the spring I fix them up for the coming season, and, so far, have not been troubled with swarming. I also keep one or two skeps for the sake of swarms. After that time is over I have a box of nine sections put on skeps. Even under these conditions I manage to get a great deal of pleasure out of bee-keeping. Needless to say I have numerous bee-letters and am kept in close touch with the workers though I direct operations from London.—W. W., Bucks.

JANUARY RAINFALL.

Total fall of rain, 5.21in.; heaviest fall, .65 on 5th; rain fell on 22 days.—W. HEAD, Brilley, Herefordshire.

RAINFALL IN 1905.

At Blair Atholl, in the County of Perth; Rain gauge:—Diameter of funnel, 5 in.; height of top, above ground, 1 ft.; above sea level, 420 ft.:

Month.	Total Depth.	Greatest Fall in Twenty-four Hours.		Number of Days with ·01 or more recorded.
	Inches.	Depth.	Date.	
January	1·37	0·36	8th	13
February	2·29	0·40	1st	17
March	4·76	0·69	23rd	23
April	2·17	0·46	14th	18
May	1·55	0·40	25th	8
June	2·71	1·18	29th	10
July	1·48	0·50	21st	15
August	3·43	0·92	4th	18
September ..	2·03	0·50	7th	17
October	2·44	0·45	3rd	18
November ..	3·80	0·71	10th	20
December ..	2·30	0·54	5th	18
Total ..	30·33			196

A. CAMERON, Blair Atholl, Feb. 5.

WEATHER REPORT.

WESTBOURNE, SUSSEX,

January, 1905.

Rainfall, 7·78 in.
Heaviest fall, 2·07 on 2nd.
Rain fell on 24 days.
Above average, 5·4 in.
Sunshine, 78·9 hours.
Brightest day, 23rd, 6·6 hours.
Sunless days, 5.
Above average, 11·4 hours.
Maximum temperature, 54° on 5th.
Minimum temperature, 23° on 24th.
Minimum on grass, 21° on 24th.
Frosty nights, 8.
Mean maximum, 47·5.
Mean minimum, 37·6.
Mean temperature, 42·5.
Above average, 5·6.
Maximum barometer, 30·66 on 23rd.
Minimum barometer, 29·28 on 8th.

L. B. BIRKETT.

Queries and Replies.

[3208.] *Bee-Forage Plants—Removing Brace-Combs.*—1. Will you kindly tell me the names of a few plants that yield honey in large quantities, such as clover, etc., which I could sow in large masses for my bees to work upon in the coming season. I have abundance of room for that purpose where the hives are. Messrs. Cannell's, of Swanley, sell flower-seeds for bee-forage, but don't mention names; can you tell me what they are? I think of sowing mignonette (about 1lb. or more). The expert, when he examined my hives last September, noticed that some brood-frames were joined together by brace-combs and said that I should have to separate them in the spring. 2. What is the best way to do this? Should I remove them entirely and substitute new frames fitted with foundation, or cut them asunder with a knife and replace? I only started bee-keeping last year and am therefore quite a novice at brace-comb manipulating. I lost two good colonies from wax-moth, but replaced them with two swarms, one of which is rather weak. Would it not be a good plan to give the weak lot a frame of sealed honey (if any is left) from another hive for spring feeding? I take in the B.B.J. regularly, and look forward to it every week. The weather here is very mild and open and warm. Yesterday (Wednesday), the bees were flying about quite merrily. My bees have about 1,400 young fruit trees to work on within a radius of 500ft., besides about 150 more older trees just behind the hives, and added to that open country all round for miles, so they ought to do well in a good

season. Wishing you and all bee-keepers a prosperous year.—L. L. G., Wakes, Colne, Essex, February 2.

REPLY.—1. You should confine your seed-sowing for bee-forage to a few of the best and most productive plants, and a good-sized bed of mignonette, or borage, will be found as useful as any. Mr. Geo. Rose, Great Charlotte Street, Liverpool, issues a special list of flower-seeds for bee-keepers' use. 2. If the brace-combs are caused by the frames being badly spaced, cut off the projecting parts and reduce the thickness of combs a little, so that the bees have a full half-inch between the comb-face. You will need to lift out the frames to do the job properly, but if a fine day is chosen, no harm will follow. 3. We should not rob one colony of stores to feed another, unless the one deprived has more than sufficient food. Soft candy will suffice for the weak lot, and will help to stimulate them.

[3209.] *Re-Queening Stocks.*—I shall be obliged if you can advise me as to re-queening, etc., during the coming season. I started bee-keeping at Easter-time, 1904, with a stock of bees from which I took two artificial swarms in the summer of that year; but, from inexperience, no doubt, I could not find the queen, so do not know in which hive the original queen now is. From these three stocks I took 250lbs. of honey last season. This I was enabled to do by cutting out all queen-cells, going through the hives about once a fortnight during the swarming season for that purpose. I now wish to know how I should do about re-queening, and therefore ask:—Would the following plan be advisable, viz., as each hive had queen cells built, to remove the old queen and thus let the bees re-queen themselves, or would it be better to purchase new queens. As the bees are good honey gatherers, it seems a pity to lose the strain. I cannot give very much attention to them, as I can only spare about three week-ends every month, for rest of the time the bees are perforce left to themselves.—G. P., Surrey, February 3.

REPLY.—In your case the plan proposed would be the simplest to follow, and would secure the end in view without the need for purchasing new queens, which might prove inferior to the strain you now have.

[3210.] *Transferring Bees to Frame-Hives.*—I have a stock of bees in a skep, which I purpose transferring to a frame-hive in spring by the plan given on page 140 of "Guide Book." Will you kindly say:—(1) Is it better to use frames of foundation only in lower hive, or drawn-out combs? I have plenty of the latter partly filled with honey. (2) Would a frame of honey laid on top of brood frames do instead of candy at the present time? (3) Would syrup prepared for autumn use do for spring stimulation, if diluted with the proper quantity of water and boiled up again? (4) Having a spare clean hive, would it be right to transfer the bees from one of my other hives into it in the spring? I should well scrub out the old hive before using it for the next stock. Finally after cleaning the last named hive, I would set the skep mentioned above on top for bees to transfer themselves? Thanking you for past advice.—HEATHER, Sidmouth, Feb. 5.

REPLY.—1. If the built-out and partly stored combs on hand are healthy, by all means use them in transferring, but the skep should not be placed in position for transferring till it is seen to be fairly full of bees. 2. Not so well as a small cake of candy, because of the difficult of preventing the escape of heat from the brood-chamber with so clumsy a thing as a whole frame of food below quilts. It would be far better to substitute the frame containing food for an empty one in the hive now. 3. If syrup is thick, and shows no sign of fermentation, it may be used in spring if a sufficient quantity of hot water is stirred into it to make up the difference between autumn food and that for use in spring. 4. Yes, the plan proposed will be quite right.

[3211.] *Moving Hives in February.*—I have two hives which I wish to move a distance of a hundred yards from one garden to another, which is across a road). It would be impossible to do it in a gradual way, as recommended in the "Guide Book," as it would mean moving them down a garden path which is in constant use. Therefore, I ask:—1. Could I move the hives bodily from one site to the other before the bees start flying, and would they (the bees) or would they not fly back to the old site? 2. Would this month be a suitable time to do the moving, if desirable. — W. A. N., Renfrewshire, Feb. 4.

REPLY.—1. Under the circumstances detailed above, we advise moving the hives at one operation. It will minimise the risk of losing bees by the change of location, if you adopt some handy means of altering the appearance of the hive fronts by laying a leafy branch of a tree on the alighting board, so as to partly block the entrance to hive, and in this way give the bees some trouble to get out. This will cause them to notice the change of surroundings on taking wing. 2. Yes, the sooner moved the better

[3212.] *Bees Crossing Rivers.* — Will you kindly answer the following: —

My hives all face south, and directly in front of them is a strip of large oak trees, which prevents the bees taking a straight flight to their front. The result is that they have to rise up from their hives, turn about, and fly in the opposite direction, which means they have to cross a river (the Tay), which is fairly wide at this point. I have often heard it stated that having to cross a river when out honey-gathering is injurious to the bees, and so I ask:—1. Is this true? 2. Does it prevent or retard their honey-gathering when they cannot get straight out from their hives? 3. Is felt a suitable covering for hive roofs, if given a few coats of paint?—SCOTIA, Perthshire, Feb. 5.

REPLY.—1. The danger to bees in crossing rivers arises through their being blown into the water during high winds. Beyond this risk, it is only loss of time in crossing the water. 2. It is, of course, an advantage for bees to have a straight line of flight from the hive front to the forage-ground, and having to surmount difficulties in working must retard honey-gathering more or less. It is simply a matter of degree. 3. Yes, but much depends on the particular kind of felt used.

[3213.] *Dealing with Bees in Boxes.* — Will you kindly advise me in the following:—In August last I bought a June swarm in a box, and was recommended to let them stay there until the spring of this year. This I have done, and I purpose following the advice given in B.B.J. by allowing the bees to transfer themselves to a proper frame hive. All stores gathered last year were allowed to remain, but I have no means of spring feeding at the top of box. Can I put candy in at the entrance in order to insure the bees having sufficient food? I cannot tell what amount of stores they have, because I made a shell to fit over the box, and put sawdust between to keep in the warmth, and if the bees are disturbed at present, I suppose, it may chill them. I think they are alright at present, but I want to make sure of them coming out strong, because we are situated so high up. We are always late in spring, from a bee-keeper's point of view. I hope, however, to reap some advantage from the heather. 2. Can you give me the address of the secretary of the Derbyshire B. K. Association? This is my first start in bee-keeping, but I have read up your valuable BEE JOURNAL, and intend to become a regular subscriber, and wish the paper every success.—PEAK, Sheffield, Feb. 3.

REPLY. — 1. We should try and cut a hole about two inches square in top of box for feeding purposes. I would be less trouble to do this than give candy at entrance. 2. The hon. sec. of the D.B.K.A. is Mr. R. H. Coltman, Station Street, Burton-on-Trent.

Notices to Correspondents & Inquirers.

*** Concerning our footnote on page 46, on the subject of jute cloths for bee-keepers' use, Mr. J. C. B., Loughboro', writes as follows:—"Why should not 'R. N. R.,' Tayport, N.B., advertise his jute bee-cloths? I would readily take a dozen of them on trial. Of course, they would go above the linen cloth over the frames. We very much need some cheap packing for the top of our hives." There is no reason whatever why jute cloth for use on hives should not be advertised in our columns. The course we took was entirely in the interest of "R. N. R." himself; and, as a matter of fact, meant loss to ourselves, but this, we hope, will never stand in the way of giving the benefit of our experience to those who seek help from us.

NOVICE (Derbyshire).—Bee Candy.—Your sample appears to have been only boiled for a very short time. It will no doubt be freely taken by bees while freshly made, but we fear it will be hard and rather granular when the moisture dries out of it.

C. C. (Cheltenham). — Faulty Foundation.—The sample of "buckled" and twisted comb clearly proves that the wax from which it was made had been mixed with some adulterant to cause its extreme softness. We are glad to hear of some recompense being made by the maker, who has probably been imposed on himself, as no one in his senses would wilfully send out foundation that will fail entirely in giving satisfaction to users.

H. G. E. (Norwich). — Joining County B.K. Association.—The hon. sec. of the Norfolk B.K.A., Mr. C. J. Cooke, Melton Constable, will no doubt send particulars of membership and advantages arising therefrom if applied to.

CONSTANT READER (Watford).—Fitting Up Sections for Use.—Most bee-keepers use full sheets of foundation in sections, but some are content wth a small triangular piece fixed point downwards. Why not invest 7d. in the "Cottager's Handbook," or 1s. 8d. in a Guide Book to learn all about the various questions asked? It is plain you are in the elementary stage of the craft, and need a text book badly.

ERRATA.—Referring to the question of standard frames, Mr. W. Loveday writes to say that his letter, beginning tenth line from bottom of first column on page 26, should read:—"I am in favour of a wider top-bar, preferring a frame 1 1-16 in. wide, with the bottom-bar $\frac{1}{8}$ in. narrower."

Editorial, Notices, &c.

DEATH OF MR. JOHN M. HOOKER.

Our readers, especially those of the older school, will share our sorrow at the news, just received from America, of the death of our old and esteemed friend, Mr. J. M. Hooker, who passed away on January 31st, in his 77th year. Pending a more extended notice of his services to bee-keeping, which we hope to give next week, it may be said that in him has gone from our midst one of the most prominent figures among those who, during more than thirty years, have laboured to promote the industry of bee-keeping in this country.

Mr. Hooker helped to establish the British Bee-Keepers' Association in 1874, and from that time until he left for America a few years ago, he was one of the most useful and active members of the Council, being re-elected every year, and rarely missing a meeting. Nor did his interest in bee-keeping cease after leaving England, as his contributions to our pages show. His death will be sincerely regretted by all who knew him.

NOTTINGHAMSHIRE B.K.A.

ANNUAL MEETING.

The annual meeting of the Notts Bee-keepers' Association was held at the People's Hall, Heathcote Street, on February 10, Mr. P. Scattergood presiding. Amongst those present were Mrs. Laws, Messrs. A. G. Pugh, W. Herrod, W. P. Meadows, R. Mackender, J. Herrod, R. J. Turner, G. Smithurst, J. Gray, W. S. Ellis, W. Darrington, and G. Hayes, secretary.

The committee's report, in referring to the honey season, stated that the experts had during 1905 visited 194 apiaries, containing 716 stocks of bees, 586 of which were reported healthy, and 37 diseased in varying degrees. In regard to the latter there was a slight increase. The committee were doing all they could to suppress the disease in the county, and it was hoped that the members would back up their efforts by closely following the instructions of the experts. There had been a slight increase of the membership, the financial position of the association was about the same as last year. The report was adopted.

Viscount St. Vincent was re-elected president, and the following were elected as committee:—Messrs. T. N. Harrison, S. W. Marriott, A. G. Pugh, G. E. Puttergill, G. E. Skelhorn, G. Smithurst, H. W. Dickman, W. H. Windle, F. G. Vessey, W. Darrington, W. H. Stoppard, G. White, and W. Adams. Mr. G. Hayes was re-appointed secretary, after holding office for eleven years, and Messrs. Pugh and Hayes were re-elected delegates to the B.B.K.A.

After the meeting the members partook of tea. Subsequently addresses were given by Mr. P. Scattergood, Mr. W. P. Meadows, and Mr. W. Herrod, F.E.S.

The meeting concluded by the usual drawing for hives and appliances kindly given by the president and other gentlemen.—GEO. HAYES, secretary.

HONEY IMPORTS.

The value of honey imported into the United Kingdom during the month of January, 1906, was £1,532.—From a return furnished to the BRITISH BEE JOURNAL by the Statistical Office, H.M. Customs.

Correspondence.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

*Communications relating to the literary department, reports of Associations, Shows, Meetings, Echoes, Queries, Books for Review, &c., must be addressed only to "*THE EDITORS of the 'British Bee Journal,' 8, *Henrietta-street, Covent Garden, London, W.C." All business communications relating to advertisements, &c., must be addressed to "*THE MANAGER, 'British Bee Journal' *Office, 8, Henrietta-street, Covent Garden, London, W.C."*

NOTES BY THE WAY.

[6203.] On seeing my last "notes" in print, I found that I had been made to say Mr. Alexander's method of one large apiary versus several small ones may be applicable to this country; possibly my caligraphy may be so unreadable to printers that they have to guess at the full meaning of my "notes." But, however this may be, I did not intend to convey the idea that very large apiaries would be profitable in this country, as we are so much at the mercy of the everchanging weather; but I contend that given a good district and a good honey-flow, the few stocks of bees we have to the square mile do not gather more than a small portion of the nectar available in the flowers growing around them, though in poor seasons in the same district the average from, say, a hundred hives is—as my old bee-man used to say — "nothing to brag" about. I thank our friend Allen Sharp for calling attention to the matter, and I trust we may have the opinions of many other of our bee-keeping friends on the subject. For myself I had no idea of any one keeping so many as 750 hives in one location, and Mr. Alexander must have

a unique position to be able to do it with success.

I quite agree with Mr. Sharp that bees in one apiary only a few miles distant may be busy storing honey, while in another lot of hives the bees are living from hand to mouth. This may, however, be occasioned by alternate waves of heat and cold, seeing that the temperature at one place may be considerably higher than at the other. Or it may arise from fields of special forage being near at hand in the favoured spot, yet out of reach of the other bees. I have noticed this myself more than once in my own apiaries.

The Standard Frame.—If it should be decided to alter the size of the present "standard" frame, I have no doubt that the B.B.K.A. will require some valid reasons for so doing, and, speaking for myself, I trust that readers who have given the frame Mr. Soal (page 51) mentions as a modification of Simmins's "Commercial" a fair trial in comparison with hives holding standard frames, will give us their unbiassed opinions in the B.B.J. The dimensions of top-bar sent by Mr. Soal for inspection by the B.B.K.A. (viz., $\frac{7}{8}$ by $\frac{7}{8}$) has two winter passages cut through it, but these holes would get filled with wax or propolis—unless they were tin-lined—that at least, was my experience many years ago. On the other hand, tin ferrules inserted in the combs just under the top-bars were never filled up. I would suggest that the top-bar be made $1\frac{1}{8}$ wide, as this width prevents brace-comb and propolisation to a marked degree; screw-drivers or pincers are not needed to remove honey-supers when worked over frames of this width frames, and a lot of stings are saved in a double sense on both the part of the bees and their keepers.

Big "Takes" of Honey.—I can assure Mr. "W. W., Bucks," who writes on page 57, that I have myself had takes of 100 sections from one or two hives in most good honey seasons, and I may add that the stocks which have yielded such big returns are always marked down to supply queens another season, so that they may improve my working strain of bees. I often hear of the good work swarms accomplish in super-honey, besides establishing a good stock for wintering. Colonies that stand out head and shoulders above their fellows are—shall I call them? the successful ones in the bee-world.—W. Woodley, Beedon, Newbury.

PREVENTING SWARMING.

[6204.] I have been asked several times by a subscriber to your valuable paper, to give its readers my method of supering, by which swarming is almost entirely prevented. The full details of everything in connection with my plan would occupy too much space, I will, therefore, write as briefly as possible. First then, I allow the bees to follow their natural inclinations, wherever possible, and to do this, one needs experience. I have kept bees in frame-hives for 20 years, and now have about 60 colonies. Among the many things I regard as useless are queen excluders, metal ends, dummy boards, and all strong smelling disinfectants in or near my healthy colonies. What can be more opposed to the nature of bees than dipping sweet-smelling combs into a bath of izal, etc., and thinking that the bees will gladly accept such an addition to their homestead? I still stick to a brood-chamber holding ten (standard) frames as being large enough for an ordinary queen in all seasons. The shallow-frame is too shallow for me; I find a frame 1-inch deeper than the ordinary shallow-frame much better, as they fit nicely in a box made from 7-inch flooring boards as imported into this country. I find deal flooring quite good enough for hive-making. Many will call me primitive because I have had to drop back to old things and old ways; but most of the advanced methods do not equal them. Dummy boards are discarded because my bees are never cooped up on six or eight frames, they are wintered on the whole ten brood-frames, and should there be a super on, that also is left in position; then the newly-hatched bees in spring enter it in the most natural way, and start work therein when the time comes. When this super is two-thirds full, I sometimes pop another underneath if the strength of the colony justifies the action. By wedging up the hive, it is often possible to keep the whole force at work on one super by using the extractor. This keeps the bees going and dispenses with the trouble and labour of filling a second super with new combs for storing honey in; time is so precious during the honey-flow that we must take full advantage of it. It is safer to use two supers when the apiarist is much away from home, and should under-supering not be relished, remove four or five frames of honey from the first super, replace with empties from the second, put the full ones into the latter and place it on the top; this may be done any evening, and it is more easy, the first plan is difficult unless the bee-keeper is thoroughly used to it. There is an old saying, "Give bees plenty of room, and they will not swarm." Though not always true, there is sufficient truth in this to enable one to prevent 19 out of 20 colonies from swarming, and this is the principle on which I work. My reason also for leaving a super in position all winter as a preventive is, first, because bees do not, as a rule, swarm by choice, but of necessity; there

are occasional exceptions, but not more than one in twenty; second, by the time the permanent super is three parts full, the swarming season is on the wane, and the colony has not started building queen-cells. This last is brought about by the uncomfortable crowding for want of super-room. But by allowing the bees to occupy the super left on, room is given in advance. When queen-cells are commenced, prevention of swarming is impossible, and the extra room, if given, comes too late, and too sudden. Again, when a queen excluder is used for the bees to struggle through, the queen being prevented from following them is unnatural, and the bees, in consequence, prefer to swarm, and the whole internal arrangements are upset. My plan is to let the queen wander at will among her subjects; a little brood in supers occasionally is nothing compared to what I have mentioned. When the honey flow is over, I extract all super honey and replace combs over brood-nest, there to remain throughout the winter; but where feeding is necessary, I first allow bees to clean up the combs, and then remove two for a time, which gives sufficient space to admit of syrup feeding without removing the super. When feeding is completed, replace combs, and cover well with quilting. If this method is followed, the swarming difficulty will be a thing of the past. I maintain also that colonies are worked up into strength in spring as quickly as by any other method of wintering, that much labour is saved, combs are kept much more sweet, and free from mice, rats, and wax-moth, and no storage room is needed.—OWEN BROWNING, Ashley, King's Somborne, Hants.

LARGE "TAKES" OF HONEY.

[6205.] As your correspondent, "W. W., Bucks," in his paragraph on page 58 in last week's B.B.J., invites a reply from myself, I have much pleasure in satisfying him as to how the "take" of 114lb., mentioned in my former letter, was compiled. From notes kept for reference the following details relating to surplus have been taken, and these, I hope, will keep our friend W. W. from "wondering" any longer. The hive in question yielded as follows:—First of extracted honey in shallow-frames I took 22lb. on July 9, and same day got 21 1-lb. sections. Then on July 25 I extracted 23lb. from shallow-frames and removed 42 1-lb. sections. Finally, I got 6lb. in comb and extracted honey from unfinished sections on September 10, making a total of 114lb. as stated. Unsuitable weather in autumn accounts for the poorness between end of July and mid-September, but I also had a good number of built-out sections at end of season.

As will be seen from above, no honey at all was extracted from brood-frames, although I must confess to not having always adhered to this idea, but this No. 2 hive having given, to my mind, such a grand surplus, and also being very strong in bees at the close, I decided (right or wrong, I am not quite sure yet) to let stores in the body-box alone, and even to give two bottles of syrup in addition. No bee-keeper worthy of the name would rob the brood-chamber to its full extent as W. W. suggests, and when large takes are intimated now and again, I do not for an instant imagine that this course has been adopted. Nor, in fairness, should our friend arrive at this conclusion simply because he himself is unable to obtain anything like a three-figured "take." This No. 2 hive on June 18th sent out a 6½lb. swarm, which was duly returned. In a week or two the bees crowded 10 brood-frames, 10 shallow-frames, and 3 racks of 21 sections each, and were so numerous that hundreds could find no room inside at night, and were forced to cluster under porch and over alighting board. This proved disastrous one night during which it rained heavily, and the part of cluster beyond protection of porch perished.

Will our friend still entertain doubts when I say that, with this hive, had the district been richer in bee forage, the total of 114lb. would have been considerably increased and that "above board," too? Unfortunately, the heather was entirely of no use as regards surplus, owing to unfavourable weather, and this cut off a further possible pound or two.

It is no uncommon occurrence for bee-keepers more favourably situated to exceed the cwt. from a single hive, but it is my record so far, and should it be broken this coming season, then for W.W.'s sake (seeing he is a beginner like myself) I will intimate it.

Although not wishing to criticise, I would like to say that after reading our friend's letter I thought the reasons why his harvests never came near to what he "read about" are not very far to seek. It is a great pity, both for W. W. and his bees, that the number of his visits to his apiary per annum stands at the low figure of three.

And now, Messrs. Editors, I give you full liberty to cut this long story up as you please, but be sure, please, to leave sufficient in to convince W.W. of the error of his thoughts.

I thank you very much for the frank and kind way in which you treated my last letter, and if you will give me the address of "J. C. B., Loughborough" (page 60), I shall forward him samples of jute cloths as sent you.—R. N. R., N.B., February 10.

BEE-KEEPING AS AN OCCUPATION.

[6206.] I have read with much interest the letter of your correspondent "Sahib" (6187, page 43), and the conclusion I have arrived at is that a man who could earn £150 a year from bee-keeping in England, would not have time to spend it. My view of the "probabilities" of making the sum stated is based on the following calculation:—(1) An average of 100lb. of honey per hive would be a "record" take in this country. (2) Fifty pounds would be a good take. (3) Thirty pounds is a more likely all-round harvest. We must also bear in mind the seasons of entire failure. (4) The wholesale value of honey does not exceed 6d. per lb., so that the last-named figure would produce 15s. per hive, and therefore, 200 stocks would be required to yield £150 net clear profit. To establish an apiary or apiaries, and purchase the necessary plant in good working order in a good district, would need the expenditure of close on £500, either in time or money, for if the bee-keeper makes his own hives, etc., there is the value of his time gone before his apiary has reached the profitable stage. To make the matter plain, I ask: Can a boy, as he enters on the first day of his apprenticeship, say I know my trade? Or, to go further, can he, on finishing the last week of his apprenticeship, say I know all about the business? I, therefore, ask your correspondent, who has, may be, spent the greater part of his manhood abroad in his country's service, could he enter direct into a life requiring much technical knowledge, combined with experience, and at once expect to succeed?

I have often said a man has only mastered the growing of a plant when he has succeeded in mastering its enemies. And it is just so with bees; sooner or later the extensive bee-keeper finds disease about, and he must master that trouble or great will be his loss. We hear of very big things being done with bees in that land of big things, the U.S.A., 750 colonies in one yard, with a 5,000 acre range of buckwheat for bee forage, that has never failed a harvest yet. Mr. W. Z. Hutchinson says:- "Bee-keeping is not an occupation in which one can easily become wealthy; but it can be depended on to furnish a comfortable living. Fortunately, the professional man's happiness bears little relation to the size of his fortune; and the man with the hum of the bees over his head finds happiness deeper and sweeter than ever comes to the merchant prince, with his cares and his thousands."

Merrie England is too "tight" a corner of the world to do such big things, but the hum of the bee can help to give many a pleasant hour to, say, a retired soldier, and add moderately to his wealth; that is, if he loves bees, their stings, and is fond of work!—J. Gray, Expert B.B.K.A., and C.C. Lecturer, Long Eaton.

THE STANDARD FRAME.

UNIFORMITY IN WIDTH OF SECTIONS.

[6207.] Referring to your editorial on page 41, and the appeal for co-operation, may I venture to say that it should be quite easy to come to a conclusion with regard to the standard frame? No one objects to the present size; it is only the strength of component parts that are questioned, and some of these, at least, require to be much stronger. The question of spacing frames is important; movable ends are, according to my experience, superior to fixed ends; I have proved that the $\frac{1}{4}$-inch space in summer—secured by the "W.B.C. end"—effectively keeps down the building of drone-comb, and assists in controlling swarms. But it is very different to talk about fixing a standard for sections, seeing that whatever section was chosen for a "standard" it might immediately take the lead, simply because is was so named, and shut out other sections, even though another may be found to be far superior. This has occurred in the U.S.A. Mr. Calvert, of the A. I. Root Company, writes me that the American standard, $1\frac{7}{8}$ inch wide, takes the lead, and more of this section are manufactured for the States than of all other kinds put together. The Roots, and a number of other able and advanced bee-keepers, favour no-way sections, and especially the tall no-way one. I think that bee-keepers should be encouraged to experiment before a standard section is fixed, or even attempted to be fixed; $4\frac{1}{4}$ by 5 by $1\frac{5}{8}$, with fence separators, without longitudinal slabs, but all one piece, should be a section worth experimenting with. I think that the Rev. Mr. Lamb is trying something of that kind this year.—Wm. Boxwell, Patrickswell, Co. Limerick.

("*Correspondence*" *continued on page* 66)

HOMES OF THE HONEY BEE.

THE APIARIES OF OUR READERS.

In Mr. Hall we have a bee-man who is yet in the experimental stage, and as experience is the best of all teachers—as we have ourselves found out—we shall be glad to have results later on. His useful notes read as follows:—

"I have now been a bee-keeper for over seven years. My interest in bees was first aroused by hearing a lecture, given in the local schoolroom, when I was about twelve years of age. Soon after this I tried my hand at making a hive, which, as I had

never before seen or handled a properly made one, was, of course, all wrong, and has to be knocked to pieces. When about sixteen, I began to take the "B. B. J.," and two years after, having seen into a neighbour's hive, I made another attempt at hive-making, the result of which you see in the fifth hive from the shed in photo. I had now an empty hive, but no bees, so in the following May I bought my first stock of bees in the hive painted red in the picture (the third from shed on right). I got it home allright, and about two days afterwards had my first peep into a stock of live bees. The following autumn I bought a driven lot of bees, and so stocked my home-made hive. I then bought the "W.B.C." hive shown; next followed the "Wells," always stocking them with driven bees. The winter of 1903-4 I occupied with hive-making, and managed to knock up five more. One thing in particular regarding the "Wells" hive may interest your readers. I must say that athough so much abused, it is my favourite, and I have secured more honey from it than any other two hives in the place. I work for extracted honey only, and I have eleven hives, all of which, with the possible exception of one, are headed by queens of last year. I have also an excellent manipulating and storage house, part of which is in the picture, and all necessary appliances. Three of the hives shown are headed with "White Star" Italian queens, to which I am giving a trial. I may say that I have never lost a stock during winter yet, but this year I am trying Mr. Simmins's plan of wintering, namely, feeding up practically solid in the autumn, and with sticks under quilts, and then leaving the bees alone, without candy, until spring. The above-mentioned gentleman argues that bees naturally hybernate during winter, and if artificially fed during winter they loose much of their vitality for early summer. The argument seems feasible, so I am trying it. I have never yet seen the inside of any other hives but my own, with the exception of two, which were bought by a friend of mine who knew nothing about bees, so I had to work them for him. One being found very bad with foul brood, was destroyed; the other is allright, so far, for the winter. I am glad to say that with care I can keep my apiary free from disease, which I have learnt to understand from painful experience. Being a market gardener by trade, I cannot devote very much time to my bees, but as experience is gained I think I get more and more enthusiastic in our hobby. Regarding the sale of bee produce, my chief difficulty is in getting enough of it to sell, and that at rather a different price to what I read of in your journals. In conclusion, I can only say that I have obtained all my information from your B.B.J. and *Record*, along with the "Guide Book" and Simmins's "Modern Bee Farm." I am afraid I have made my

MR. A. HALL'S APIARY, MANY PITTS, MARTON, BLACKPOOL, LANCS.

"notes" too long, but if I have you can condense them. Wishing you every success for your publications, long life and happiness for yourselves."

CORRESPONDENCE.

(*Continued from page* 64.)

SIZE OF FRAMES.

[6208.] In reference to Mr. Soal's letter on page 57, *re* size of frames, will you kindly allow me to give my experiences with the 16 by 10 side by side with the standard frame. I have worked two hives containing ten and six 16 by 10 frames respectively for four seasons. Transferring occupied the first, and the second found No. 4 behind, the others about equal. Third season repeated the second in all matters of importance, and last year, the best season I have ever had, I resolved to carefully note results with a view to further experiments. Here is the return for 1905. Eight stocks, spring count; No. 1, thirteen sections, swarm June 26 retained. No. 2, forty-two sections. No. 3, seventy-four sections. No. 4 (ten 16 by 10 frames), thirteen sections, swarm July 15 retained. No. 5 (six 16 by 10 frames), fifty-seven sections, swarm July 5 returned. No. 6 no sections, swarm June 26 retained. No. 7, forty-nine sections. No. 8, fifty-two sections. There was no honey in supers on July 1. In the coming season I shall reduce No. 4 from ten to eight frames, and hope for a better return, as I think that ten large frames allow too much honey to be stored in brood-chamber. Hoping this will help some of your readers in their attempts to get at the truth of this matter, and that 1906 will bring prosperity to our JOURNAL and its readers, I will sign myself ECONOMIC, Worthing, February 12.

THE FRAME QUESTION.

[6209.] Now that the question of dimensions of the standard frame is under consideration, may I call attention to the serious inconvenience that will be caused to all bee-keepers and appliance dealers if the size of the frame is altered. I am sure that most bee-keepers will agree with me when I say that the proposed slight alterations in the dimensions are immaterial, and will not affect the honey production. I consider that the present B.B.K.A. standard frame cannot be improved on. I wonder what our large honey producers, such as Mr. W. Woodley, thinks of the proposed change? What will he do with his old hives and appliances? He will not be able to use two kinds and sizes, as they will not be interchangeable. W. ALLEN, Rutland, Feb. 10.

TROUBLE AMONG THE BEES.

HUSBAND, NOT PIG.

[6210.] I notice in B.B.J., January 11, (page 17), Mr. Jos. Hulbert gives your readers an interesting and rather exciting account of a time when, in his novitiate days, a simple and not very unusual mischance to a bee-keeper when manipulating hives caused "a lively time" to poor "Piggy" who chanced to live in a sty near at hand. This account reminds me of a similar incident which occurred in the apiary of a well-known expert and lecturer who eventually became a king among bee-men. The gentleman I refer to was largely gifted with Irish humour, and also loved a pig, and used to say, "I can tell you the very quickest way to fatten pigs. I had some once which fattened up in the most marvellous manner in a few hours." Then he related the story of how—when only a novice with bees—he once upset a hive while manipulating, and the bees—after attacking him in such a vicious, spiteful way, that he ran for dear life—proceeded to vent their wrath on two innocent porkers of his which were trying hard to get fat, and were on no other business intent. The sequel is already hinted at. But, reader, do not laugh! Allow your sympathy to flow towards both bees and pigs!

Mr. Hulbert may be thankful that it was only "Piggy" who came badly off in his case. A somewhat similar occurrence happened in my own apiary three or four years ago. A very heavy crate containing sealed frames of honey ready for removal from one of my hives was to come off, and the strong arms of him who calls me wife were kindly offered to lift it for me. I did the smoking (too much, I now fear), and, as I thought, got everything in readiness for the operation. But I had not prepared for brace-comb, which, in this case, had firmly fastened about four of the frames in a lower surplus-chamber to those in the one being removed. My husband's powerful arms were equal to the task of lifting, but he said, "My word, this is heavy. You've got some honey here," when bump, bump, down fell first one frame, then another (the others I saved), and such a lively time as followed may be imagined. It was not "Piggy," it was "Hubby," for he had only his slippers on, and, moreover, was clad in thin, wide summer trousers, up which the bees crawled, stinging as they went! Again, readers, I ask you not to laugh. It was no laughing matter!

A moral there is to this little story. Husbands, don't go to help your bee-loving wives with feet clad only in slippers, or legs wrapt loosely in thin garments!—M. S., February 8.

AMERICAN AND COLONIAL PAPERS.

EXTRACTS AND COMMENTS.

By D. M. MACDONALD, Banff.

A New Bee Paper.—In this country we have had bee newspapers with an ephimeral existence. One after another has gone up like a rocket and come down like a stick! Texas, however, bears the palm for the number of short-lived journals, if we are to credit the *Bee-keeper*, from which we learn that "it is a dull season in Texas when that State cannot record the advent and demise of one or two bee journals. We trust that the *Apiarist* may find its journalistic trail strewn with more nectar-secreting flowers and less cactus thorns than have been encountered by the many which have already found an eternal resting-place in the Lone Star State." Let me express a hope that the growing importance of the industry in Texas may give the *Apiarist*, the new paper, a long and useful career. There is surely room enough for all the apicultural journals published in America. I note our Editors are listing the cream of them for sale in our country.

Hibernation.—This being the dead time of the year, the journals feel the effect of the inactivity, and their pages temporarily prove less interesting to the student of apiculture. Several display a considerable amount of "padding," as if matter had run down and the pages had to be filled somehow. For instance, one consists of thirty-eight columns, and of these the editor writes or compiles thirty-two. Another with forty-four columns has *no* original matter at all. Even the much belauded Christmas number of *Gleanings*, although a work of art and the fruits of very special effort, was read and filed without one single marginal note for future reference; the first occasion on which an issue of this paper has been so dealt with.

Caucasian Bees.—I note the war against these "undesirables" is still going on, and the general verdict is decidedly against the innovation. Certificates have been given in their favour by two gentlemen, but it is worth recording that the names of *both* appear in the bee papers as advertisers of Caucasian queens! Is this a case of "*an axe to grind?*" It turns out, however, that there are Caucasians and *Caucasians*, because Mr. Pitoff (a Russian bee-keeper) mentions that, in addition to the black species, of which we have heard so much, there are "yellow and dark yellow." It almost makes one ask, Is the whole affair a bit of a hoax, and are the bees really local "sports" of our common races?

A Good Honey-Strainer.—For those who do a large amount of extracting, that honey pail of Mr. E. A. Alexander's, figured on page 27 of *Gleanings*, is the best and most expeditious appliance I have ever seen. There is no patent, and it is so very easily made that it will be largely copied I have no doubt. Here are the instructions. Take a stout tin pail, cut off two inches at the top. Then make a frame of folded strips of tin, soldering them to a lower rim, and the top part cut off. Line the inside of this frame with the fine copper wire-cloth used for milk-strainers, the finest mesh procurable, and you have a model strainer quite capable of removing every particle of foreign matter from the honey. This effective and expeditious mode of procedure is so great an improvement that it requires only to be named to be adopted.

In Dreamland.—The Editor of the *Review* has increased an apiary of twenty colonies to one hundred and four, and proposes to increase them on a large scale during the coming season, establishing out-apiaries at a distance from home. It is in the management of these latter that he appears to leave *terra firma* and get away up into the clouds. Five visits a year are supposed to suffice! In early spring he digs the bees out of their winter home; at the beginning of the full honey flow he puts on supers; two or three weeks afterwards he pays a third visit (problematic); after the flow comes visit number four; and "the fifth and last will be made to bury the bees, or put them in the cellar." If Mr. Hutchinson, most sanguine of men surely, finds his ideal a success, I don't wonder at his preaching the doctrine of specialisation so very strenuously. In fact, we ordinary mortals, who give our bees regular and prolonged attention, may get notice to quit any day if he succeeds.

Blood Tells!—A writer in the *American Bee-keeper* claims that a hive facing south yields yearly a greater quantity of honey than those facing in any other direction. The editor gives his view emphatically: "There is little doubt that if this apiarist will turn the entrance of this particular colony to the north-east or west, its superiority will still be evident. If he were to stand the thing on its head, yet it would outstrip its competitors in the honey-gathering contest. If he will exchange queens with some one of the inferior producers, however, he will doubtless find that the favourable record will follow the queen." I face my hives south-east, but I would have no hesitation in placing them in any but a due north position. A favourable aspect undoubtedly counts, but the stock headed by the good queen comes out first every time. I have said this before, and read it too, but a good thing will bear being repeatedly repeated.

Miraculous!—"I am curing Foul Brood with no medicine, no swarming, and no broodless interval (!) I am able to put my queens right on to combs full of brood

more or less diseased, and these queens walk right through it, and bring the stock out clean every time! I don't think there is any class of bee disease to which they will not put a stop!" This comes from America (Gleanings, page 22), but was actually written by an Englishman. How is it that this marvellous discovery has not been heard of on this side? The writer claims to be the inventor of the so-called Alexander cure of black brood (and foul brood?), and his early editions prove beyond doubt that he had ideas on the subject? I take this for granted, but if they had any good in them, why is it that we on this side have never heard of *one single* cure being recorded?

Queries and Replies.

[3214.] *Beginner's Queries — Cost of Hives, etc.*—I started bee-keeping last year with one stock of bees in a modern frame-hive, purchased from a well-known dealer, and, finding the "hobby" most interesting, I afterwards bought five more hives —old ones, but well stocked with bees. One of the hives was in fair condition, another nearly new, and two of the others will be fairly good make-shift hives if I put new roofs on; the fifth hive, however, was no good at all, so I had to leave this lot behind for removal later on. I therefore ask:—1. When would you advise me to move this stock and how, seeing that they are at least three miles away? I could have the use of a pony and trap as conveyance. I may also say the bees are on frames, and I was wondering if it would do to put the old worn-out hive into a sack and carry it away bodily, or would you try and get the bees into a new hive and leave the old one behind for firewood? Upon examination I found that in two of the other hives the frames would not move, they having been fastened together by the bees, but I am afraid the answer you gave to query No. 3208 (on page 59) did not apply to my case, as in trying to get the frames apart I broke off the top-bar in several of the frames. 2. Would you recommend me to have another try to pull out the frames now firmly fixed and replace such as get broken in the process, or would you leave the bees on present frames and let them swarm? I am taking the B.B.J. regularly this year, and, so far, have found it most useful and instructive. I have also read the "Guide Book," but have not as yet come across anything in print which deals with such operations as I now have to carry out in transferring the stocks bought. I should therefore esteem it a great favour if you would let me know what to do, as I am quite a novice. 3. May I also trouble you to correct the enclosed list of things I shall be likely to want for my six hives, and let me know if I am too extravagant, as I want to make my hobby pay, if possible; but, of course, I only expect to clear expenses this year. I think it only fair to say that when I examined the bees that I mentioned as bought from a dealer, I found they were short of stores, but to my surprise there was brood in every stage of development in the combs. Of course, I immediately supplied them with a good cake of candy from "Guide Book" recipe (No. 2), which they have taken very well. In conclusion, I think bee-keeping a most interesting hobby, and hope the JOURNAL will have a prosperous year, and thanking you in anticipation for replies to my queries. — B. J. M., Cringleford, February 11.

REPLY.—1. Your best course to take in removing the dilapidated hive and bees will be first to safely secure the bees in their present home by closing entrance with perforated zinc; then make fast the hive to its floorboard with two or three screws. This done, if there is any risk of bees escaping on journey, tie the whole up in a square of the coarse open canvas (or "scrim") used by upholsterers, gathering up the corners and tying on top. The hive may then be set in a corner of pony trap on a bed of straw or between your legs while driving home. Arrived there set the hive on its stand, and leave till after nightfall (if convenient), then remove canvas—the bees will have settled down and be quiet by morning. If removal is delayed till warmer weather the quilts will need removing, and top-bars covered with "scrim" secured by a frame round sides to give ventilation on journey. 2. The safest plan of transferring the bees to a new hive will be to defer operating till the stock is strong enough to fill present hive in spring, then let the bees transfer themselves as directed on page 140 of "Guide Book." 3. Do not fix on such a priced list as that sent. Consult a reliable dealer, after seeing two or three catalogues, and ask his price for such things as you may need for working five or six hives this season. He will, if a fair-minded man, give a price for the lot, according to your views regarding the quality of goods desired.

[3215.] *Moving Bees in Spring—Wiring Frames.*—I have to move my bees to another place, rather less than two miles distance direct, and would rather defer removal till after April 6, and so I ask:—1. Is that date a safe time for moving the stocks, or will the bees return to their old stands here? 2. In one of your bee-papers last year some one recommended aluminium wire for use in wiring frames.

Where can this be bought, and at what price? No one seems to know anything about it. Also can aluminium ¾-inch wire nails be had for bending into hooks? Ordinary wire nails rust badly. 3. I have three racks of sections, in some of which the foundation has not been touched at all, while others have the combs built out, but the stocks on which they were used did not store any honey last year, probably because of being slightly affected with foul brood. Can the sections be disinfected, or must I burn them—which is painful. 4. The above infected stocks were treated with phenyle, and in the autumn our expert found only three infected cells in the worst, and one or two in the others. If these stocks are not worse when I examine them, what is the proper treatment? 5. Is it well at this season to put naphthaline in stocks? There is usually a good deal of foul brood not far from my bees. And how long should this treatment be continued? I send you an extract from the letter of a brother-in-law of mine, who lives in Australia, as it may be of interest to readers who possibly have thoughts of emigrating. It reads as follows:—"As to honey, I have no notion what is the record production for a single hive in Australia. The most I ever got in one summer was 308lb. from an eight-frame hive with supers—extracting some four or five times during the honey-flow. But I should think it likely that at least twice that weight has been taken. It was at —— that I got that. Here, there are too many bees about, except when the lucerne is in full flower; then it would be hard to overstock the district. Honey now sells here at 2d. to 2½d. per lb. in 60-lb. tins, and 3d. retail. So there is not much in it. One would think it would pay to send Australian honey to England; but it has been tried by several, and the wholesale buyers in London will not give as much as it is worth in Sydney. So nothing can be done, unless a depôt could be formed, which would sell direct to grocers in the country towns."

The letter from which above is copied was written on October 22, 1905. The writer lives in New South Wales. Please allow me to sign as before — B., Lincs, February 9.

REPLY.—1. There will be little or no risk of bees returning to the old location if moved at the date mentioned. 2. We do not recollect any mention of aluminium wire for bee purposes in our paper, nor do we think it would be used for wiring frames. The ordinary wire in common use cannot well be improved on. The same may be said of nails, so far as our knowledge goes. 3 and 4. If the stocks to which combed-sections were given are so slightly affected as stated, we should not fear to use them again, after spraying with soluble phenyle. 5. Those who use napthaline as a preventive, keep it constantly in hives, but there is no particular need for its use in the busy honey-gathering season, when bees are not disposed to do any "robbing."

[3216.] *Doubling and Storifying.*—1. If two stocks are used for storifying, should the doubled stock store four or five times the honey in supers that the same two stocks would store in shallow frames? 2. Does the use of shallow frames take the place of storifying?—a sentence in "Guide Book" seems to indicate the author's opinion that this would be the case. 3. Does experience show that the "non-swarming" chamber below brood-nest is beneficial or otherwise? — BEEFOWL, Henley-in-Arden, February 6.

REPLY.—1. We should say the chances of such result are very remote indeed, and it is not easy to say why the bees should be expected to do so much on the storifying plan. 2. Since the introduction of the shallow-frame, it has gradually taken the place of the Standard for extracting purposes, and may now be said to have almost replaced the latter for use in surplus-chambers. Some bee-keepers continue to use the larger frame for surplus, but inquiries from our leading hive-makers show that the number is decreasing every year. 3. However beneficial the non-swarming chamber may be to bee-keepers who are perforce compelled by circumstances to adopt it, the plan is hardly ever used by those who keep a number of hives mainly for profit.

[3217.] *Dealing with Cross-built Combs.*—I have had a hive of Italian bees given me, and on examining the frames I find they are all fastened together by brace-combs. I have tried in vain to lift the frames out, but they are so fastened down that the top-bars only break off in trying to raise them up. I should like to make an artificial swarm in the coming summer, as directed in the "Guide Book," but it will be impossible to carry the plan out as the frames are immovable. Would you kindly tell me in the B.B.J. the best way to deal with them?—F. L., Burton Lane, February 7.

REPLY. — You cannot do better than leave the bees on the frames they now occupy, and when the stock is strong enough in spring, follow the directions given in "Guide Book" (page 140) for alowing the bees to transfer themselves.

[3218.] *An Appreciative Query.* — Will you kindly say in this week's B.B.J. whether the enclosed sample is pure honey or no? May I, at the same time, thank you for the advice you so generously give

in this department, which is absolutely invaluable to those connected with the honey industry and beekeeping. Allow me also to say my life-long interest in beekeeping began when I was about twelve years old by helping a relative, who kept thirty or more hives on the then modern system, and have continued on my own account, with short intervals, ever since 1870! It was, however, like groping in the dark until I heard of the B.B.J.—P. L. F., Rawdon, near Leeds, Feb. 6.

REPLY.—First let us say the sample of honey sent is fair in quality, and we see no reason to doubt its purity, but it is not a good honey for table use, being rather coarse in flavour. For the rest, we are glad to have been of some service to you as a beekeeper, and appreciate your good wishes.

[3219.] *Making a Start with Bees.*—I am about to commence bee-keeping, and propose to begin by purchasing a stock. May I ask the following question? — 1. What are the good and bad points of Italians as compared with English bees? There seems to be such a diversity of opinion on the superiority of one breed over the other that one becomes bewildered. What I should like to see is a brief statement of the pros and cons, and I will be glad if you can help me. 2. I have been advised to order a stock early in March. Is that too soon? 3. When the stock reaches me must the bees be transferred to the hive at a particular time of day, or will any hour do? Also, must they be subdued by smoke before operating? 4. After the bees have been hived must they be packed with chaff as for winter till the warm weather comes, or will the usual quilts on brood-box be sufficient? 5. The hive I have is a "W.B.C." Must the division-board—or dummy—remain in the body-box when the full number of frames are in? I ask this question because there is no room left for lateral movement when the dummy is in place along with all the frames, and there seems to be some danger of the bees being rubbed when withdrawing it. On the other hand, will the bees build out the end comb if the division-board is absent? Your reply will oblige.—H. PERCIVAL, Manchester.

REPLY.—1. The superiority, or otherwise, of Italian bees over the native is a moot point, even with bee-keepers of experience, and probably will always be a matter of personal opinion. This can only be tested by trial for comparison. To occupy space with the "pros and cons" would only increase your "bewilderment" and serve no useful purpose so far as deciding the question. 2. No. 3. If the stock ordered is on built-out combs in standard frames it may be transferred to the new hive as soon after arrival as convenient, if weather is mild and fairly warm. You will need to use a little smoke while operating in order to keep the bees quiet. 4. It is usual to give plenty of warm coverings overhead in early spring, as this helps to promote brood-rearing by conserving the warmth of the breeding compartment as much as possible. But no chaff-packing is necessary for this purpose. 5. Yes; the dummy is intended to remain in hive always. In your case we should contract the brood-chamber to as many frames as the bees cover after hiving. The danger you apprehend is quite imaginary.

Notices to Correspondents & Inquirers.

Letters or queries asking for addresses of manufacturers or correspondents, or where appliances can be purchased, or replies giving such information, can only be inserted as advertisements. The space devoted to letters, queries, and replies is meant for the general good of bee-keepers, and not for advertisements. We wish our correspondents to bear in mind that, as it is necessary for us to go to press in advance of the date of issue, queries cannot always be replied to in the issue immediately following the receipt of their communications.

"BIDO" (Kidderminster).—Starting Bee-keeping.—1. Mr. J. P. Phillips, Spetchley, is hon. secretary of the Worcester B.K.A., and will no doubt be pleased to have you as a member, and advise as to making a start with bees. 2. You will find names, etc., of the most reliable manufacturers and dealers in bee-goods in advertising pages of this issue. Write for catalogue from any you may select to deal with. 3. You cannot hope to make headway with bees without the help of the "Guide Book."

S. H. SWINCHATT (Birmingham).—Hives and Bees for Beginners.—The reply to "Bido" given above applies equally to your case. It would be obviously unfair for us to recommend either particular dealers or name the price you should pay for hives or bees when so many are equally good.

J. SKINNER (Bristol). — Improving the Standard Frame. — We will be very pleased to submit your frame along with others to the B.B.K.A. Council in due course, and if anything new should strike you within the next month or two, it might be well to send another sample as altered. You might also send cost per gross or 100 for making same—this item being asked for by the Council.

W. H. K. (Hunstanton).—Candymaking. —Your sample is too hard for use as bee-food. Good candy is quite soft and "buttery" in grain.

ABDUL-MASSIH (Devon).—Caucasian Bees. —Opinions differ even in the U.S.A., with regard to these bees, and it will therefore be well to await Professor Frank Benton's return from the mission entrusted to him by the U.S. Board of Agriculture at Washington before venturing an opinion with regard to the Caucasian bee.

Editorial, Notices, &c.

JOHN MARSHALL HOOKER.

The late John M. Hooker, whose death we mentioned in last week's B.B.J., was born at Brenchley, in the county of Kent, on April 26, 1829. He was the youngest son of Stephen Hooker, Esq., of Broad Oak in that parish, who inherited, and died possessed of, considerable landed property in the counties of Kent and Sussex, which, by his will, he directed to be sold and divided among his wife and nine children then living.

Having been brought up in one of the prettiest rural districts, Mr. Hooker at an early age took great interest and pleasure in all the resources of a country life, and occupied his spare time in shooting, hunting, bee-keeping, and farming. His father, who was a very clever and scientific man, was an advanced bee-keeper, and during the summer holidays his son assisted him in his apiary, and accompanied him in his drives over to the apiary of Mr. Golding, of Hunton, in Kent, only a few miles distant; listened to the bee-talk, and witnessed the manipulation of the bees, which were kept in Huber and Grecian hives. Mr. Golding was the author of a book on bee-keeping, called "Golding's Shilling Bee-book," and invented an improved form of Grecian hive, having movable *bars*, so that with a little management the surplus could be taken. These hives, which were not large, were storified three and four high, and were at one time used by Mr. Hooker, who obtained large quantities of honey of a superior quality in the upper hives. Upon the introduction of frames, Mr. Hooker was amongst the earliest of those who adopted them, and his Grecian hives were given up.

At the beginning of the Volunteer movement, Mr. Hooker took great interest in the same, and with his friend, George

JOHN MARSHALL HOOKER.

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Tomkin, Esq., of Yalding, raised a corps in four or five adjoining villages, of which he was appointed Captain, his friend being Lieutenant. On getting married, some years after, he left Brenchley, and gave up the command of the corps.

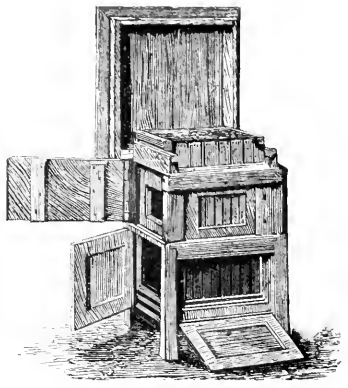
In 1874, Mr. Hooker became acquainted with Mr. C. N. Abbott and Mr. Frank Cheshire, and attended a meeting with those gentlemen (called by Mr. Abbott in the BEE JOURNAL), at Camden Town, for the purpose of revising a schedule of prizes for the first Crystal Palace Exhibition, and to consider the best means of forming a National Bee-Keepers' Association.

On this occasion the Hon. and Rev. H. Bligh took the chair, and on his being obliged to leave, Mr. Hooker, who presided till the close of the business, was one of a committee chosen to carry out that memorable show. At the general meeting of bee-keepers then present he was appointed on the Committee of the British Bee-keepers' Association, which had then been formed.

From that time, 1874 up to 1889, Mr. Hooker served on the committee of the Association, being re-elected annually.

At the second Crystal Palace Show, 1875, in Class 2 for the best movable comb-hive for depriving purposes, the second prize and bronze medal were awarded to Mr. Hooker, who also secured the first prize and silver medal in Class 4 for the best hive on the collateral principle. In speaking of this class, the Editor of the BEE JOURNAL (Mr. Abbott), says, "We must, however, give credit where it is due. We may here remark that our first notion of a movable dummy, *the greatest improvement until now* introduced into frame-hives, came from Mr. Hooker.

At the third show of the Association, held at the Alexandra Palace, 1876, Mr Hooker was awarded a silver and two bronze medals for the best hive on the storifying principle, and the best collateral hive. In the editorial giving an account of this show is the following remark: "In all Mr. Hooker's hives the 5-24-inch perforated zinc plays an important part, as by its use the entrance of the queen and drones to the honey-comb is prevented." Since that time the use of queen-excluder zinc has become general both in England and America. At the Royal Show at Windsor, Mr. Hooker exhibited a super weighing 75lbs. nett, which was filled by the 14th of June through the Raynor pattern of perforated zinc. At the show at South Kensington in 1878, a bronze medal was awarded to him in the class for the best movable comb hive, and at the great show at Kilburn in 1879 he obtained a bronze medal for his Alexandra hive, and the same year, at the exhibition at South Kensington, the silver medal for the same hive. In 1880, at the South Kensington show, Mr. Hooker obtained a bronze medal for his hive and another for his super. In 1883 the first



HOOKER'S ALEXANDRA HIVE.

prize was awarded him for the best movable comb-hive. Mr. Hooker was one of the judges at the Royal Agricultural Society's exhibitions for several years, also at several of the Bath and West of England and Royal Counties shows. In the Bligh Competition of 1882-1883, he obtained the first prize for largest quantity of honey, etc., from one swarm. Mr. Hooker's mechanical knowledge enabled him to make many improvements in hives and appliances, and he invented an ingenious uncapping machine, which, however, was too costly to come into general use. In 1888 he published a small book called "Hooker's Guide to Successful Bee-Keeping," and has been a constant and faithful contributor to our pages.

We are indebted to the kindness of the Editor of *The Agricultural Economist* for being enabled to give the latest portrait of Mr. Hooker on previous page.

Our acquaintance with him began in 1874, and the friendship then commenced was kept up to the last. Mr. Hooker left for America a few years ago, after the death of his wife, to reside with his son, Dr. Samuel C. Hooker, and we were pleased to see him so well and cheerful in his new home and among his new surroundings when we visited Philadelphia last spring, and passed a couple of days in his company, talking over old times. He then got us to append our signature to the illuminated address which was presented to him by his friends and colleagues on the Council of the B.B.K.A. on his leaving for America, and seemed happy that he had been able to have it completed in this way. He was also gratified at the cordial greeting from the members of the B.B.K.A. which we

were deputed to convey to him, and seemed very pleased to be so cordially remembered. It was on this occasion that we visited the Swarthmore apiaries with Mr. Hooker, and saw the keen interest he took in the method of queen-rearing there in vogue, which he has described in the pages of this journal.

The news of our friend's almost sudden death was conveyed to us in a communication from his son, Dr. Samuel C. Hooker. The letter is dated Feb. 3, and from it we quote as follows:—

"After a few days' illness, my father died on the morning of January 31. Until less than a week before his death, his health was excellent, and it was a pleasure to see one of his years (nearly 77) take such an active interest in everything about him, and enjoy life so thoroughly. He retained to the last his life-long interest in bees, and found new pleasure here in the acquaintance of kind friends who, like himself, were interested in bee-keeping. May I ask you, through your journal, to kindly notify his friends in England that he has passed away?"

Personally we feel keenly the loss of Mr. Hooker as that of a life-long and esteemed friend, who was ever ready to help in any way, and we also realise that the pioneers of bee-keeping in this country, and those connected with the earliest history of the British Bee-Keepers' Association, have all passed away except the Chairman of the Council, who is the only survivor. We are sure that all will unite with us in sincere sympathy with the family in the loss they have sustained.

Correspondence.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

AMONG THE BEES.

SHALL WE CHANGE THE "STANDARD"?

"Hold thou the good: define it well."

[6211.] These wise words of Tennyson's might be both a guide and a beacon to bee-keepers at the present juncture. Our forefathers, wise men in their generation, recognising that apiculture, like all other cultures, had passed through the age of barbarism, when each man was a law unto himself, wisely resolved to have a "standard frame." They perceived that affairs were getting into an inextricable tangle, and that individualism threatened to secure chaos. Out of that maelstrom a few wise heads evolved order and secured success. Our ranks are being yearly recruited. New men arise who "knew not Joseph," and so almost yearly, there is a recrudescence of opinions and ideas, ghosts of the past, which have been resurrected and laid time after time. The craving for reform, when it runs the length of revolution, belongs to the period of a man's youth. The desire to conserve what has stood the test of years is an attribute of maturity. So we find the "revolutionists" on the subject of frames, as a rule, in the ranks of those who have only recently started out as members of the craft. Though they may be old in years, they are young in experience. Enthusiasts as they are they seek for perfection in change. So they trot out their discoveries, and entreat the world to come and admire, only to find that the practical eye of sage experience reveals to them the fact that their ideas are only identical copies of dead and buried treasures of the past, and that they have been eagerly chasing shadows and illusions. These dreamers of day-dreams, as their knowledge ripens, generally end in accepting the truth of my Tennysonian quotation, both in substance and in fact. Experience almost invariably adopts the teaching of these other wise words (uttered nearly two thousand years ago), "Prove all things; hold fast that which is good,"—of which the poet's words are only a variation. The so-called reforming spirit displays a perennial discontent, demanding change too often for change's sake.

Now, I do not mean for a moment that things should remain fixed and unalterable; that our appliances should become stereotyped and that there should be no deviation from even what has become recognised as rules or even laws. That might do for the Medes and Persians, but for modern civilisation it is inapplicable. Life among the bees would lose half its zest and interest under such hard cast-iron rules, for we live in an inscrutable world of constant change. Even bees do "nothing invariably." Our JOURNAL recognises that we live in a changing order of things, but it also recognises that there is identity alongside this change. It pauses on the last step and refuses to advance until it has proved the way to be safe and the goal worthy of attainment. It teaches the conservation of all fundamental truths which have been proved, thus securing for us a continuity of purpose and aim.

On this question of frames no man is handicapped. He can experiment as much as he pleases. For myself, I have in the past acted on this and tested deep frames, with the result that I discarded them, as I believe ninety-nine out of every hundred

have done, after experience of their faults and shortcomings.

I am still testing large frames of the "Langstroth" size and make, which have led to so much recrimination and debate in America quite lately. By the way, when some are so clamant in favour of *deep* frames, and point to other countries where they are favoured, it may be well to look at this particular frame, bearing in mind that it may be called the "standard" frame in America. It is of exactly the same comb-bearing depth as our own standard frame. Ours is, outside measure only, 8½in. deep. It is 9⅛in.; but the thicker top and bottom bars reduce its internal depth to 8in.—so we have the same depth of comb. This is very interesting and instructive. Revolutionists might take a note!

My opinions on the standard frame have been given so recently that I can add little new in its favour. This I may say, however, that when I have found a bee-keeper gushing over deep frames, I have come across at least one other enthusiastic over shallow frames for the brood-body—showing, I think, that the standard is the true mean between two extremes. It is a fact that, both here and in America, for one (like our Mr. Soal) favouring deep frames, you get several who believe out and out in shallow ones—much shallower than any in use for the brood-bodies. Pat to hand comes the following, written the other day by one of the largest and most prominent apiarists on the other side:—"But where does the eight depth come in? Is it 7in. or 10in.? I incline to the 7in. depth, and if I were keeping bees up North (he is in the tropics), particularly if comb-honey were my aim, I would select a hive no deeper than the Danzenbecker. The shallow hive puts the honey in the supers—yes, all the honey, and that, too, without trouble and fuss. I have been told that in the tropics comb-honey was a failure, as the bees refused to work in the sections, and I have recommended shallow hives. Even where extracted honey is run for in the orthodox manner—with deep frames—there is too much honey in the brood nest, and, needless to say, the conditions are worse when comb honey is sought for. The bees keep piling honey in the brood-combs till actually the colony dwindles." So good and successful a bee-keeper as Dr. C. C. Miller quite recently spoke in a commendatory way of the depth of our standard frame, and there is a saner trend of opinion in America in favour of an approach to a similar depth. Why then should we seek to retrograde?

I hope that the committee entrusted with the consideration of the subject will be able conscientiously to give their decision for a minimum of change, even on the minor structural variations some plead for, and that they will leave severely alone all outside measurements. The frame has, in the past, stood the assaults of all carping critics as no other frame has ever done, so I end as I began—"Hold thou the good: define it well.—D. M. M., Banff.

APICULTURAL NOTES.

[6212.] I was very sorry, on opening my JOURNAL last week, to see the announcement of the death of our old and esteemed friend, Mr. Hooker, and equally sorry to hear of the death of Dr. Bartrum a few weeks ago. When one thinks of the British Bee-Keepers' Association and its associates of 20 to 30 years ago, and remembers the familiar faces or well-known names of those who are no longer with us, one's thoughts produce feelings which cannot be easily described. It is true we are having added to our ranks young and able recruits whom we respect, and whose labours we appreciate, but that does not lessen our regret or our admiration for, and indebtedness to, those who have passed away, leaving their good work behind for the benefit of those who come after.

Size of the Standard Frame.—Some of our friends appear to be dissatisfied with the standard frame, and wish for an alteration. The question has been discussed many times, both in the JOURNAL and elsewhere. Members of our Hunts B.K.A. have more than once given the matter serious consideration, especially in the happy days when we had with us our dear old friend John Howard, who was not only a deep thinker, but a great experimenter. But we could never, all things considered, see sufficient cause to justify an alteration in the present size of the standard frame. It was generally admitted that some of its parts might be strengthened, but more often than not the cause of trouble was shown to be the kind of material used rather than its size. The late John Howard always used "best pine" for the purpose, and paid a high price for it. Not only so, but he kept it in his drying shed for twelve months before using. The number of frames used in my apiaries, made at the "Holme" Factory, goes into four figures, and I have never had any cause for complaint, although many of them have been in use for years. But some frames among the few got elsewhere have caused me great inconvenience through the sagging of top-bars, the latter being evidently made of green and unsuitable material. I notice that Mr. Woodley, in his "Notes by the Way" last week, advocates a top-bar, 1⅛-inch wide, instead of the ordinary ⅞-inch one. No doubt, such a frame possesses the advantage claimed for it; and the only thing I should fear is that the wider top-bar—by reducing the space

between the bars—would cause more of the perforations of the queen-excluder to be covered, and thus tend to impede the free passage of the bees into the surplus-chambers. But then the question arises, 's the queen-excluder necessary? Mr. Owen Browning (6204, page 62), apparently thinks not, and goes on to say, "When a queen-excluder is used for the bees to struggle through, the queen being prevented from following them is unnatural and the bees, in consequence, prefer to swarm, and the whole internal arrangements are upset." For myself, I am quite unable to agree with Mr. Browning's theory as quoted. I worked something approaching to 100 stocks last year with the queen-excluder without having had a single swarm, and if a series of, say, ten years are taken, my average number of swarms from such hives would be even less than the number—1 in 20—given by Mr. Browning as a result of his better plan, and of discarding queen-excluders altogether. If other conditions are favourable, *i.e.*, if the necessity or desire on the part of the bees to swarm arises, I do not think the eventuality would in any case be either delayed by the absence of a queen-excluder or accelerated by its use. I use 12 frames in the brood-chamber, and this appears to give ample room for breeding purposes, and sufficient space for the bees to store enough honey to last them till honey comes again in the following year. This dispenses with the necessity for feeding. I never use excluders below sections except when the latter contain ready-built combs. If the queen should happen to spoil a few sections, they are easily removed without much loss, and without detriment to the remaining sections. But I strongly object to the queen taking possession of shallow-combs that are to be extracted. In the latter case you not only get brood in the wrong place, but also pollen, and to extract from combs that contain pollen there is the risk—almost a certainty—of the comb breaking just at the edge of the pollen-patch; and every cell of pollen means so many cells less of honey. Furthermore, when one has a big day's work of extracting before one, it considerably expedites matters in removing surplus to know that the queen is secure below the excluder, and that there is no fear while handling surplus-combs of either losing or injuring the queen.

ALLEN SHARP, Brampton, Huntingdon.

THE STANDARD FRAME QUESTION.

[6213.] I read your editorial remarks on page 41 of the issue for February 1, and being one of those who like to hear both sides of a question, while giving a fair trial to everything on which we are to form an opinion, I may be allowed to say that the present standard frame has had a lengthy trial in my hands, and experience convinces me that it is of great value, and cannot be much improved upon. I therefore say if any bee-keeper complains of "sagging" as a fault (though I never find a frame to sag myself), why not go in for a stronger top-bar? But I can instance a case in my own apiary which should be a fairly good proof that the present top-bar is quite strong enough for a frame of the standard size. Here are the details:—I have three old hives in my bee-garden, with frames $17\frac{1}{4}$ by $10\frac{3}{4}$, and the strength of the several parts of these frames is exactly the same as that of the original standing, yet there is no "sagging." I stocked these three hives with bees in June, 1885, and from that time to the present day the hives have never been unoccupied, nor even been disturbed by lifting a frame out for inspection. In fact, beyond clearing the floor-boards periodically, the body-boxes have been left entirely alone. Sometimes they are supered, and in other years left to swarm; yet, strange to say, they are always the earliest and best colonies I have. These hives are open to the inspection of any expert who cares to see them, and the top-bars of frames will be found as straight as on the day they were put in twenty years ago. I think this should be good evidence on the point of non-sagging.

On the other hand, I would like to ask—If the present standard frame is to be altered in size, what will be the result? Our extractors and many other appliances will have to be renewed to meet the altered conditions, and the present hives be rendered almost valueless from being non-interchangeable with the new sized ones. I say, therefore, "let well alone."

I have been a reader of the B.B.J. for twenty-two years, and have in all that time never missed a single copy to my knowledge; moreover, I am as proud of it as ever; the "Homes of the Honey Bee" being specially interesting. I was, however, a bit surprised at our friend Mr. Drew, in his "Notes" (on page 55), condemning the use of driven bees for building-up stocks from. For my own part I would like to say that with a 4lb. lot of bees in September, hived on four frames of foundation alternately with four of built-out comb (eight frames in all), and fed up well for three or four weeks, they will be in fine condition for winter. I have myself, on examining such a stock in about a fortnight after hiving, found most of the frames almost a mass of brood in all stages. Such a stock well tended will be stronger in spring than a June swarm.

I purchased such a lot (4lb.), of driven

bees through your advertisement column in October last, and they reached me in splendid condition; but, owing to my being full up with bee-work at the time, I did not get them hived and fixed up till five days after arrival, but I only found less than half a dozen dead bees when unpacked. Then about the "spring dwindling," as Mr. Drew puts it—driven bees, according to my experience, are almost free from it. The lot I have mentioned above were, when examined one fine warm day last month, stronger in young bees than any hive in my apiary. Indeed, I never before saw quite young bees flying in January, and there was brood in five frames.

In query column (3208, page 58), "L. L. G., Wakes Colne," inquires about bee-forage plants. I find nothing better than white arabis and wallflower for pollen in early spring. With best wishes to all brother-bee-keepers and our Editors. — E. J. T., Gowdall, Snaith, Yorks, February 14.

PAINTING QUEEN BEES.

[6214.] In reference to your footnote to my contribution on above subject (6185, page 42), I can assure you there was no confusion in my mind, but evidently I failed to convey my meaning. I quite understand the reasons for clipping queens and the results that follow the mutilation of queens' wings. When I used the words, "Surely some means of marking a queen's wings could be resorted to which would not be so cruel as clipping, etc.," instead of "marking" I should have used the word colouring or painting. When we put coloured chalks or paints on sheep or other animals for the purpose of identification we call that marking, and it was in that sense I used the word. The meaning I wished to convey was that the colouring of a queen's wings would not be such a cruel operation as the clipping of them.

I note what you say about the pollen dust being stored in the hive having been removed from the hairy bodies of the worker bees. That may be so; all the same, bees of all colours can be seen coming out as well as going into the hives.

As regards the main point at issue—the question of cruelty—that can be decided by experiment, and it is the only satisfactory way. If it is admitted that it would be of advantage to the craft if queens could be made easily observed, I think it is a matter for experiment; and if, when properly carried out, the colouring of a queen is proved to have retarded her in the discharge of her maternal duties, then, and not till then, will I be convinced on the cruelty question.

You describe Mr. Swabey as an intelligent bee-keeper; this being so, his opinions should be worth some consideration. I would suggest that he should give us some details of his experiences, but more particularly in connection with the subject under discussion. It would be interesting to know if his hives containing the queens "daubed with paint" did or did not give as good results as his hives containing unpainted ones. — ALEXANDER REID, Balloan, Moray, N.B.

PAINTED QUEENS.

[6215.] I am late in replying to what has been said on this subject, because of being loth to enter into any argument with our Editors. But my last contribution to the subject (on page 12) appears to have been misconstrued in the footnote appended thereto, for I did not mean to recommend successive coats of paint, nor "repainting in various colours" the queen-bee of a colony. I advise those only, who know how to handle a mother-bee, to apply paint to young queens of one season, and another coloured paint to those of the next season, and so on, for the purpose of determining their ages. The chief thing is to carefully avoid squeezing the abdomen, or blocking the spiracles of the queen operated on in so doing. It appears to me that I have been unjustly dealt with in this case, judging by the crushing reproof in the editorial footnote to Mr. Alex. Reid's letter on page 42, and I will be glad to have it pointed out where the "needless" cruelty that I am charged with is thought to arise, and whether it is of greater degree than in exhibiting a queen in an observatory hive, or in illustrating "bee-driving" at shows, or even in opening an ordinary hive and spending half an hour in queen-bee exploration? I may then learn how the laying qualities of a queen-bee are affected; otherwise I do not know. Meanwhile, so far from modifying my views, I advise Mr. Reid to give the painting plan a trial. He need not open his hives for this specific purpose, as the queen is often accidentally seen during ordinary manipulations, and may be marked on the first opportunity. I venture to think that he will be more than pleased and that *queen-hunting* will become a fascination rather than a disagreeable and unsatisfactory chase; he will, in fact, be able easily to find over twelve queens per hour, under this system.

I know the opinions of prominent and competent judges residing outside of Lincs, who have awarded me first prize for my observatory hive and its painted queen at a leading show outside Lincs, in addition to an award on every occasion I have exhibited within our county, and I hope to obtain similar results in other directions.

I also trust that judges will not differ on the painted queen question. It would have been satisfactory to give names of the judges I refer to, but I refrain for obvious reasons. — T. W. SWABEY, Bracebridge Heath, Lincoln, February 12.

[With regard to our footnote on page 13, and to the so-called "crushing reproof" of Mr. Swabey, conveyed in the reply to Mr. A. Reid, on page 42, we think that readers generally will concur in our view that further discussion is neither necessary nor desirable. The respective letters, together with our observations regarding them, are in print for reference by anyone sufficiently interested, and we are content to be judged thereby. Not only so, but we venture to hope that this course may commend itself to our friend, in view of the expressed unwillingness—conveyed in the opening sentence of the above letter—"to enter into any argument with our Editors" on the subject. For ourselves, there is nothing further that we care to point out or explain by way of justifying our opinions, and if Mr. Swabey declines to accept our suggestion (a purely friendly one), to modify his views on the question of painting queen-bees exhibited in observatory hives on the showbench, it remains for him to prove his case by converting the judges before whom his exhibits come for arbitrament.—EDS.]

A WORD IN SEASON.

[6216.] A short time ago I noticed a reference made by your contributor, "D. M. M.," to an American apiarist who feels that he cannot "get rich quick" in knowledge of the craft without devouring the contents of each and all of the numerous bee-papers published under the Stars and Stripes. Whether the honey of wisdom is best gathered from many fields may be a moot point, but on this side there is little risk of going astray in the limited forage provided for our delectation.

True, England has its B.B.J. and *Record*, the "disthressful" country even has its own bee journalism served up hot and strong, but we Northern bee-men have no paper of our very own in which to voice our sentiments. The uncharitable Southerner will, of course, credit this to the characteristic reluctance of Scotia's sons to "bang" away "saxpences" in support of such unprofitable ventures as bee journalism, as exemplified in the fate of the *Scottish Bee-keeper*.

Here, at least, the average bee-keeper stands aghast at the idea of expending one penny sterling weekly on bee lore This is the more to be regretted, as Rossshire affords good facilities for the honey-raising business. We have not yet made the acquaintance of foul brood or the wax moth, while the active little worker pursues the even tenor of its way unconscious of the existence of such a disease as bee paralysis not forgetting the fact that our county member, Mr. Weir, the "Weary Weir" of yawning Southern cynics, takes delight in advocating the cause of the honey bee in Imperial Parliament. Somehow "the House" fails to take the subject seriously, and the efforts of Mr. Weir have had no apparent outcome other than that of making sport for the Philistines, as on the occasion when the Lord Advocate anxiously queried as to the hon. member having "a bee in his bonnet." But I digress.

I should like to tell my fellow countrymen, just to hint to them with the great est diffidence, that, seeing we cannot support a bee paper this side the Tweed, the next best thing would be to give a stronger Scottish flavour to the pages of the B.B.J. We are fortunate in having "D. M. M." to represent us in these columns, but would like to hear from some more of our friends who can secure good crops and dispose of them to advantage. What has become of the cheery writers who used to enliven the pages of the *Scottish Bee-keeper*. That they are conspicuous by their absence from the B.B.J. is a matter of regret to—J. M. ELLIS, Ussie Valley, February 19.

THE "NON-SWARMING" HIVE.

A BEGINNER'S EXPERIENCE WITH IT.

[6217.] A querist in this week's issue of the B.B.J. (see No. 3261, page 69) puts a question *re* this type of hive, and, in reply, our Editors apparently do not favour its use, while in a back number when answering another correspondent, they say that it is not a suitable hive for a beginner. As a beginner myself last year with the "non-swarmer," I should like to endorse your statement, and also give a brief account of my own experience, which may be both salutary and interesting at this season when accessions to the ranks of bee-keepers may be expected.

I chose this type of hive on account of its alleged non-swarming properties, but I soon found that any virtues it possessed in this direction were more than counterbalanced by increased difficulty in working. The non-swarming chamber consisted of a box of shallow-frames, and, acting on the maker's instructions, these were transferred to a position above brood-chamber, when the bees had started work upon them, and the boxes refilled and replaced the last operation placing the queen in jeopardy and involving the destruction of a large number of bees. The frames had to be transferred singly, and, besides causing great disturbance, care was neces-

sary to ensure the queen being in her proper place, and also to prevent robbing. Becoming disgusted at last, in consequence of all this trouble and the loss of bee-life, I left the non-swarming chamber empty with the result that the bees filled the same with combs built crosswise and attached to the bottom of brood-frames. You can imagine the result when I attempted to remove the latter for examination in the autumn! The combs were broken, honey ran about, robbing started, and for three or four days my one poor hive became the object of a general attack by all the bees in the district. Apparently my troubles are not yet ended, for on looking through the entrance the other day, the bees seemed to be busy building again, filling up the box, which (still in accordance with the maker's instruction) had been left empty for wintering. It is said that "Nature abhors a vacuum," and it is evident that *apis mellifica* also abhors a space below brood-chamber.

My advice to would-be bee-keepers is to leave the "non-swarmer" severely alone. The old hand needs no advice. One of these aptly summed up the situation to me thus:—"New hands can't work them, old hands *won't*." Name sent for reference.—NEOPHYTE, Beds, February 16.

HIVE VENTILATION.

[6218.] I have lately been giving some serious thought to hive ventilation and the "detention system," and it has occurred to me to ask, what portion of the contents of a hive is it necessary to remove? reasoning that as it is carbonic acid gas *formed in excess* that makes crowded rooms suffocating and unwholesome, it is probably the same in the hive with its crowded population. Now as this gas is very heavy, and would always sink to the lowest part of the hive, are we not therefore working at the wrong end by allowing the much-needed heat to escape from the top, either by way of porous quilts or top ventilators?

A very simple way of getting rid of CO_2 is to place some quicklime within its reach—the plastered walls of a room will for years absorb all the CO_2 formed by gas flames burning in the room, as has recently been demonstrated by Sir George Livesey. A cake of good hair mortar, *dried*, in a standard frame and hung alongside the cluster of bees would absorb all that could be formed in a hive; or dry lime might be sprinkled on the floors.

If the product of breathing and other movements of the bees during the winter *is* CO_2, I suggest that a bottom ventilator with non-porous coverings would be better for the bees. On this point I should be glad of your opinion, and also the opinions of your expert contributors.

Mr. Simmins, in his book, recommends cutting a 2in. hole through floor-boards, which he says "will greatly assist ventilation." Why? I suggest because it would let out the harmful gas, as well as allowing fresh outside air to be diffused in the hive; but he says nothing about the necessity of excluding light — a point most strongly insisted upon by Mr. Cowan and Colonel Walker at the B.B.K.A. meetings, reported in B.B.J., March 30 and April 6, 1905.—JEWEL, Henley-in-Arden.

NOTES FROM MIDLOTHIAN.

[6219.] My bees are wintering well, and have been able to take an occasional cleansing-flight, but the critical time has yet to come in our part of the kingdom. I notice our friend Mr. Darrington—in his "notes" on page 45 connected with the "Homes" picture—thinks if he keeps his hives close together the bees find their hive better; but I think if hives stand wider apart than his the bees would find their home easier, as they can get their bearings better.

Our friend "D. M. M., Banff" (November 16, page 452), says he never saw bees "tanged," or drummed, as it was called in our locality. When I was a boy I have often seen swarms "drummed," but did not know the meaning of it.

I was greatly interested in the letter from "Amateur, Bristol," on baby nuclei (November 16, page 452). I intend giving the plan a trial, but I am afraid the brood will perish with only 300 bees to keep it warm in our locality even in the month of June. I also notice questions asked from time to time about roof-coverings for hives. I find that the cheapest and best covering I can get is zinc. I got some sheets 2ft. square the other day from one of your advertisers at 9d. each, and, after fixing them on, I can rest assured that the bees are dry. I would like to know if standard frames with broad shoulder-bar are to be bought for about 1s. 3d. per dozen? I see some advertised at 3s., but that price is too high when we may perhaps have to burn them through foul brood or other disease. As for the present standard frames sagging, it is only one in a hundred that does it through some defect in the wood. — MAC, Midlothian.

Queries and Replies.

[3220.] *Feeding Driven Bees in Autumn.* Will you kindly advise me through B.B.J. what to do in the following?—After feeding up some driven bees last October on seven frames spaced with W.B.C. ends I noticed some of the combs close to the feeder were drawn out about

two inches thick, whilst in some next to them the cells were hardly started. They are all built on the same foundation (Weed), and each hive took down 20 lb. of sugar. The food taken was all capped when the hive was closed down for winter, but I intend now to put a piece of candy on. I therefore ask:—1. Should I cut the lengthened cells down to normal depth when I add more frames? 2. What should I do with thin combs? 3. Is this irregularity in cell-building usual when driven bees are being fed? This is my first to drive and feed, and I do not want to go wrong if I can help it. 4. Is it too late to sow seed of Chapman's honey plant to be of use this season?—J. W. F., Surrey, February 10.

REPLY.—1. It will be necessary to pare the cells down—with a very sharp knife—to a good deal less than "normal width" before inserting new frames. 2. Insert these between the pared down combs. 3. It not seldom happens in the hands of beginners when bees are fed rapidly. 4. Yes, but you might get some seedlings ready for planting out for a few coppers.

[3221.] *Transferring Bees.*—I am thinking of putting my four stocks of bees into W.B.C. hives this spring, and purpose supering each hive with one box of shallow frames over excluder zinc, and section racks above. Will you kindly tell me (1) whether this plan of supering will be best, with a view to the prevention of swarming, and (2) whether it is better to use eight frames with wide metal ends in the shallow frame box, or ten frames with the ordinary ends? A reply through the B.B.J. will much oblige.—J. T. G., Woking, Feb. 19.

REPLY.—1. Give the 9-in. box of frames first, and when bees are well at work therein add the sections. 2. The ordinary spacing is best for beginners as being easier to extract, so far as regards risk of combs breaking.

[3222.] *Suspected Disease in Comb—Removing Bees from House-roof.*—1. I should be much obliged if you would inform me if the enclosed dead and undeveloped bees were killed by foul brood. I discovered them to-day in a hive built-up from driven bees last autumn. They were all picked from one frame of comb, the other combs being all right. 2. On looking through microscope I notice (in juice squeezed from abdomen) objects of peculiar shape. Are these the spores of foul brood? As I shall be away from here all the coming spring and summer, your advice as to what to do under these conditions will be most acceptable. It might interest you to know that I discovered large patches of brood in a bee-nest I was asked to remove from the roof of a house five weeks back. The bees had been there for three seasons and were in a most exposed position, with cold draughts underneath, and they must have felt the cold overhead also, as the combs were attached directly on to the slates. The result of my operations was capture of bees, queen, and 1¼ cwt. of honey. Name enclosed for reference.—P. R., Pembroke, February 15.

REPLY. 1. The partly developed bees sent have been simply chilled to death while in the imago stage, owing to the cluster having moved away from the portion of comb containing them. There is no sign of disease at all. 2. With regard to the spores of foul brood, these are shown — a photo-micrograph — together with the bacilli, on page 149 of "Guide Book," and as they are only visible through a very powerful glass, we fear you have not realised the actual size of foul brood spore, many millions of which would occupy less space than a pin-head. 3. It is difficult to advise on the best course to follow with stocks of bees left by their owner during spring and summer. Will the hives be entirely unattended for the whole time? If so, the only course would be to provide plenty of surplus room overhead; give a 6 or 8-in. wide entrance and trust to luck! But no one can say what condition they would be in on your return. Surely it cannot be intended to leave no one in charge, even to see if swarms need hiving?

[3223.] *Extracting Honey from Brood-nests.*— I commenced bee-keeping as a recreation last year with two hives, but only obtained 15 lb. of honey altogether. I removed a single frame from the brood-nest of one hive (there was no brood in it), and what I do not understand is: how honey is taken from frames when there is brood in the middle part of the comb, but honey all round the sides? Also, can you tell me if there is a Bee-keepers' Association in Gloucestershire, and if so, who the secretary is? I only heard of the B.B.J. lately, and began to take it in as soon as I could. It is most interesting and helpful to beginners.—H. J. P., Cheltenham, Feb. 17.

REPLY.—It is considered very bad practice to extract honey from combs containing brood, and no good bee-keeper thinks of doing so. The stores in brood-chambers are best left for the bees' use, except in cases when there is considerably more honey in the combs than can possibly be used as food. In such a case, the outer frames only have their contents removed by the extractor. You would no doubt get some information with regard to a B.K.A. for Gloucestershire by writing to Messrs. Brown and Son, seedsmen, Bridge Street, Bristol.

[3224.] *A Beginner's Queries.* — I have never before kept bees, but wish to try a hive this year. Will you, therefore, kindly inform me through your columns: — 1. What is the best sort of bee-house or hive? 2. How and from whom should I get the necessary bees? 3. What is the best book on the subject? 4. Midsomer Norton is in Somerset, near Bath. Do you know of any classes in Somerset where one might attend and so learn something practical on the subject? Name enclosed for reference. DESALES, Midsomer Norton, February 13.

REPLY.—We may first explain that the first two queries enumerated above are questions to which we cannot in fairness reply. There are so many good hives on the market, and so many dealers who can supply you with bees, that we cannot name any one without being unjust to others. We may, however, say that it is best for a beginner to have separate stands for each hive. Bee-houses are more suitable in some cases, but only after experience has been gained. 3. You should begin by purchasing a "Guide Book"; without the help such a book gives, it is like groping in the dark to make a start with bees. 4. We believe that a bee-keeper's association for the county of Somerset is now in course of formation, and no doubt particulars will appear in our pages in due course, when the matter has been definitely arranged.

Notices to Correspondents & Inquirers.

Letters or queries asking for addresses of manufacturers or correspondents, or where appliances can be purchased, or replies giving such information, can only be inserted as advertisements. The space devoted to letters, queries, and replies is meant for the general good of bee-keepers, and not for advertisements. We wish our correspondents to bear in mind that, as it is necessary for us to go to press in advance of the date of issue, queries cannot always be replied to in the issue immediately following the receipt of their communications.

HENLEY (Warwick). — Hive Entrances to Non-swarming Hives.—We have no personal experience of "non-swarmers" being able to prevent over-swarming by older methods. Our view of the use of non-swarming hives is to help those less experienced in swarm-prevention in getting the bees at early work in surplus-chambers. In other words to enable us to give the bees room "in advance of their requirements." This being so, the non-swarming chamber is placed below the brood-nest, in early summer, when the hive is getting well filled with bees and when work is started therein, the box (or non-swarming chamber is removed bees and all—and placed above the brood-chamber, thus giving the desired room, which is added to as needed. It, therefore, makes little difference where the entrance is placed.

G. M. (Stony Stratford). — Drone-cell Foundation.—Many bee-keepers use this in shallow-frames, but it needs rather more care when extracting, as drone-comb is scarcely so strong as that with worker cells only.

H. A. P. (Plumstead).—The honey sent is almost wholly honey-dew, and, as such, quite unfit for table use. It may be used as bees'-food in spring, if mixed with a little hot water to thin it down somewhat—the sample being very thick.

G. W. A. (Armathwaite). — Medicated Flour Candy.—The sample is a capital candy for spring stimulation, soft and buttery in grain, and nothing in it likely to make it objectionable to the bees through medicating or adding flour.

T. C. G. (Blandford).—Selling Honey.—Your sample is very good, indeed, and we do not wonder that it sells well. It may be said that quality always makes its own market.

X. T. (Axminster).—The "Tall Section" and "Fence Separator."—We should have thought that no difficulty would arise in obtaining the 5 by 4 sections and "fence separators" from any leading dealer. In view of your having been unable to get them anywhere, we advise writing Mr. Geo. Rose, Gt. Charlotte Street, Liverpool, in whose catalogue we see them named.

BEGINNER (Gateshead-on-Tyne). — Bee Nomenclature, Wiring Frames, etc.—1. Bees sent are the ordinary brown or common variety of this country. 2. All the six bees sent are adults, and none of them young. The "large one" is only less shrivelled than the rest. 3. The sample of wire for "wiring frames" (No. 35), will do, although nearly all bee-men use No. 30, as advised in "Guide Book" (page 70).

G. G. (Parkstone, Dorset).—B.K.A. for Dorset.—We are not aware of there being any bee club or B.K.A. for the county, nor can we name a bee-keeper from whom you could obtain help. Perhaps some reader will volunteer to put you in a better way than securing only half a dozen sections as a season's harvest. If this meets the eye of one such, a line to this office will oblige us, and be gladly sent on to "G. G."

M. P. S. (Torquay).—B.K.A. for S. Devon.—We are not aware if the Devon B.K.A. has a district hon. secretary for Torquay, but you would probably ascertain by writing Dr. H. M. D. Phillpotts, Eastcliffe, Babbacombe, who is near Torquay, and is a member of the D.B.K.A. council.

****** Some Queries and Replies, &c., are unavoidably held over till next week.***

Editorial, Notices, &c.

BRITISH BEE-KEEPERS' ASSOCIATION

The monthly meeting of the Council was held at 105, Jermyn Street, S.W., on Wednesday, February 21, Mr. T. W. Cowan occupying the chair. There were also present Miss Gayton, Colonel Walker, Dr. Elliot, Messrs. L. Belsham, W. Broughton Carr, J. B. Lamb, W. Sole, T. I. Weston, and the Secretary. Letters expressing regret at enforced absence were read from Messrs. R. Brown, R. Godson, H. Jonas, A. G. Pugh, W. F. Reid, P. Scattergood, and E. Walker.

The minutes of the previous meeting were read and confirmed.

The following new members were elected, viz.:—Rev. Henry Morgan, the Parsonage, Penllergaer, Swansea; David M. Park, 34, Dempster Street, Greenock.

The Finance Committee's report, presented by Mr. T. I. Weston, giving particulars of receipts and expenditure to date, was adopted.

Nominations of judges and stewards to officiate in the Bee Department of the Royal Show at Derby in June next, were made for approval by the Royal Agricultural Society.

A number of frames other than "standard" make were submitted, with descriptive letters, from various correspondents, and after examination were ordered to be stored until a later date when the matter is ripe for determination.

It was resolved to bring up for discussion at the conversazione of members, to follow the general meeting on Thursday, March 22, the following subjects, viz., "'Standard' and Other Frames" and "Varieties of Heather Honey."

REVIEW.

Advanced Bee-culture: Its Methods and Management, by W. Z. Hutchinson, Flint, Michigan. This is the third edition of a book especially written for the advanced bee-keeper and those who are making a business of the pursuit. So rapid has been the progress made in bee-keeping during the last fifteen years, when the first edition appeared, that Mr. Hutchinson has found it necessary to almost entirely rewrite it and revise everything in order to bring it up to date. The new edition will, therefore, be indispensable to those who wish to keep informed of all that is best and most profitable in bee-keeping. Mr. Hutchinson is the editor of the *Bee-keeper's Review*, and has for more than twenty years made his living by keeping bees, and "Advanced Bee-culture" is really the summing-up of the best that has appeared in the *Bee-keeper's Review* during the eighteen years of its existence. Here, then, we have the views of the most progressive men in the business, thoroughly sifted through the experience of the author, who has shown in this book how he can separate the grain from the chaff. Mr. Hutchinson is a pleasant and clear writer, and has the faculty of interesting his readers. He has described in plain language what he believes to be the most advanced methods of managing bees for profit from the beginning of the season throughout the entire year. The book is beautifully printed on art paper, and contains 204 large 8vo. pages, bound in cloth. Mr. Hutchinson is a skilled photographer, so we are not surprised to find the work beautifully illustrated with half-tone blocks. He is an earnest advocate of making bees a speciality, and begins his book with a chapter on "Bee-keeping as a Business," urging his readers to keep more bees rather than introduce any other business with them. He admits that bee-keeping is not an occupation in which one can become wealthy, but, rightly managed, it will afford a comfortable living. How this has been done, and is now being done, in America is shown in the book before us. There are chapters on "Making a Start in Bee-keeping" and "Mistakes in Bee-keeping," both very important subjects, and many others, among which that on "The Use and Abuse of Comb Foundation," will be found most interesting. It is impossible, in a short review, to mention all the good things to be found in the work, and we recommend it to our readers generally, while those who intend to make bee-keeping a business will find it indispensable. We have arranged to supply the book to bee-keepers direct from the publisher, price 5s., post paid.

Correspondence.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

**** In order to facilitate reference, Correspondents when speaking of any letter or query previously inserted will oblige by mentioning the number of the letter as well as the page on which it appears.*

NOTES BY THE WAY.

[6220.] The season of active work will soon be with us again, and the bees require a constant supply of water from troughs provided (unless near natural sources), artificial pollen (*i.e.*, pea flour and wheaten flour mixed) should also be given in some sheltered sunny spot in the apiary. The

flour is sprinkled on shavings or cut chaff in an old skep, and the bees will soon find it out. Where only two or three hives are kept, and there is a good breadth of early flowers, the bees will gather sufficient natural pollen, and in these cases the flour may do more harm than good by clogging up the cells, if gathered too freely; but where twenty or more stocks are located on a somewhat barren position, the first-named plan will be found a great help in building up stocks in spring. Another item of great importance in the same direction is the amount of food in the hives at this season. Those of us who, when packing down for winter, make a full entry on the register of each hive can guess pretty accurately how the food supply stands at this period of the year, and a mere glance will tell if candy is required in order to eke out the stores or give the bees a start in brood-rearing.

Mr. W. Allen (6209, page 66) asks what I shall do if a new size frame is adopted by the B.B.K.A. My reply is:—I shall just go on as though nothing had happened. If the depth only is altered, I may try a few of the deeper frames in order to see if the new size brings any improvement by way of increasing my output of honey. But if a wider and deeper is adopted, I do not expect to "come into line." I shall go on in the old groove and leave the "new standard" to be tried by recruits to the craft. A deeper frame would not give much trouble, or the alteration of hives be expensive to take it, as a strip nailed on top edge of present runner would allow of a trial and also enable one to return to the old standard if the new size did not prove a boon.

I thank our friend "D. M. M." for his note on curing foul brood, headed "Miraculous!" (page 67), and hope the gentleman—pointedly referred to as "an Englishman"—will give our British bee-keepers the benefit of his success. If there is any truth in the article, a fine opening lays before the lucky possessor of such a strain of bees. — W. Woodley, Beedon, Newbury.

PAINTED QUEENS.

[6221.] If I may be allowed a word on this subject I should like to say that I think there is a misconception which may easily be removed, and which is perhaps responsible for the strong views expressed. I am in entire agreement with our Editors that it is cruel to daub a queen with paint, if by this is understood the general painting of the insect, or the painting of the abdomen, as this would possibly involve the cementing together of the wonderful telescopic arrangement of the segments, and certainly interfere with the functions of the insect. Also, I do not think that it would be found satisfactory in practice to paint the wings; they might become attached together with similar results, the muscles of the thorax being impeded, and in any case their weight would be sensibly increased. The wings might be distorted, and the worker bees might possibly remove portions of them, in which case the queen would be considerably worried.

But I do not think that these objections apply equally to a small spot of paint carefully applied to the centre of the dorsal area of the thorax, from which region hair is usually entirely absent, and which is composed of the hard chitinous armour, which, so far as we know, can have no sense whatever.

I have such queens, received from abroad, and, so far as I can judge, there cannot be any question of their freedom from inconvenience, whilst the convenience to the apiarist in discovery and registration is enormous. The principle of a specific colour for the natal year is carried out in a number of large apiaries; and I noted, when with Herr Thieler at the official Swiss apiary at Zug, that a similar spot of colour was placed at the door of each hive, thus denoting the age of the queen within at a glance. This refers, of course, to a house-apiary, where the hives are arranged in tiers, and open from the back inside the house in the usual Continental fashion.

I do not wish to enter into the ethics of the matter, but this painting of the thorax of the insect would not seem to be worse than the use of a pigeon-ring or a dog-collar, and would, indeed, compare favourably with many of the practices apparently necessary to our use of domestic animals. Each must decide for himself whether or not he has the moral right to treat his charge in such fashion, but it would I think, be a mistake to dismiss off-hand what may prove to be to the practical apiarist a most valuable device. — L. S. Crawshaw, Ilkley-in-Wharfedale.

[There can be little or no objection to "a small spot of paint" carefully applied to the thorax in such cases as are referred to by Mr. Crawshaw; but, while our friend states what is true with regard to "marking," it is only done in places on the Continent where queens are kept for observation purposes. Thieler's is one of the experimental stations in Switzerland, and things are done at these places that would not be necessary in an ordinary apiary. To our mind it is quite certain that "daubing queens with paint" would be very injurious, but a small speck of colour would, as already stated, not do much harm. On the other hand, we assure Mr. Crawshaw, on the authority of our senior Editor—whose personal experience with regard to bee-keeping on the Continent he will not

dispute—that the habit of painting queens is not common, but very exceptional; and many bee-keepers there put marks on hives as seen by Mr. Crawshaw at Zug, but do not mark the queens inside them.—EDS.]

THE LARGE FRAME BOGEY.

[6222.] I note the appearance yet again of the large-frame bogey—hailed with more surprise than pleasure by our Editors. This frame question we have always with us, lying low for a time perhaps, but always in a state of combustion, and ever and anon bursting forth into lurid flame. It requires no special discernment to trace the origin and present life of the agitation to Heathfield. The "frame reform" movement got a severe blow when *Bee Chat* departed this life, but the followers are still true to the cause—the master mind still enthusiastic, still confident of winning over the majority, of bringing back the stray ninety and nine to the right path.

Whatever the cause, recent discussions of the subject have been brief compared with those of former years. It may be that the reticence of the large-frame champions is owing to the fear that heretical "copy" may, in the interests of beginners, be consigned by our Editors to the W.P.B.

The position of the standard frame is not so insecure that it should require to be fenced in against the attacks of a rival, or the friends of that rival.

Let them all come, and give us facts.

We would like to know whether our friend Phil Jones is still getting the best crops from the large-brood nests. Whether Mr. L. Quayle found the 16 by 10 frame superior in any way to the standard. In short, we might hear from a number of good bee-men who have been more or less in eclipse since *Bee Chat* expired.

Here, in the North, the larger frame is, I think, unknown, and unmentioned except by "D. M. M.," and by him consigned to outer darkness along with sections tall and bees of alien race. I have had a single stock on large frames for the past three seasons, but, at the risk of being dubbed a "hedge-hogger" must state that my attitude on the subject is still one of inquiry. While invariably taking the lead as regards yield of clover honey, the large-frame stock has been practically a failure at the heather. The frames I have are Quinby size, however which, to quote Mr. Simmins, may be "as much too large as the standard is too small."

The natural tendency of the bees being to crowd the brood combs with the late crop, a deeper frame would only tend to aggravate the evil. In fact, the standard is not a bit too shallow for autumn work, and I find that the most successful heather man in this district uses a frame only 6½in. deep. — J. M. ELLIS, Ussie Valley, February 26.

HIVE VENTILATION.

[6223.] I notice under the above heading your correspondent, "Jewel" (6218, p. 78), makes the following remarks: "Now, as this gas (carbonic acid gas) is very heavy, *and would always sink to the lowest part of the hive* (the italics are mine), are we not, therefore, working at the wrong end by allowing the much-needed heat to escape at the top either by way of porous quilts or top ventilators?" I should like to say in reply that although true that carbonic acid gas is a heavy gas, "Jewel" is quite in error in assuming that it would therefore settle down to the floor of the hive. Fortunately for man, as well as bees, this is not the way of gases. Further, I would inform him that porous quilts will offer practically no obstruction to the escape of carbonic acid gas through them, although they may be so perfectly non-conducting as to entirely prevent the loss of any heat from the brood-nest. This being so, any attempts to absorb the carbonic acid gas on the lines indicated would be quite superfluous. Your correspondent's reference to top ventilators I do not understand, but I should unhesitatingly say that any system of ventilation which allowed air-currents through the hive, and loss of heat from the top, would be "working at the wrong end." —G. S. N., Godstone, Surrey, February 24.

[6224.] In answer to "Jewel" (page 78), I may be allowed to say: The results given by bottom ventilation are so satisfactory in my apiary that the bees are wintered with ventilators open. Many bees are tempted out when a bright sun is playing on the entrance, only to perish if a keen, cutting wind is blowing at the time; but the cool air admitted through the ventilator checks this, and the bees do not break their cluster until more favourable conditions prevail. Result: Stronger colonies in spring. The ventilator I use is 14 in. by 14 in. It is readily adapted to a properly-made "W.B.C." hive—i.e., one with separate stand and floorboard. No extra timber is required; only the perforated zinc. By its use in winter the carbonic acid gas readily escapes, leaving a dry hive and no mouldy combs.

If your correspondent will refer to report of the conversazione in B.B.J. of March 30 and April 6 last year he will find full information given by the chairman, Mr. Cowan, and Colonel Walker, regarding the detention system, and ventilation with free flight.—J. GRAY, Long Eaton, February 24.

BEES AND BLUE FLOWERS.

[6225.] You will perhaps remember Lord Avebury's paper published in the *London Magazine* in 1903 entitled "Can Insects Reason?" in which he describes the exhaustive and carefully-conducted observations and experiments proving that hive-bees in their honey-gathering operations show a decided preference for *blue* flowers.

An observer states: "It is a natural inference, from Lord Avebury's experiments, that bees ought to select *blue flowers* for their visits. But when we go out into the garden or fields and watch them at work we find that they *do not*"; and quotes numerous observations he has made on different-coloured flowers to prove his assertion.

May I ask if any of your readers who have studied this subject can corroborate Lord Avebury's experiments? I send name, etc., for reference, and sign — BEES AND BLUE, Sussex, February 22.

[Several of Lord Avebury's papers on bees and kindred subjects have been commented on in our pages, but not the one referred to. It may, however, be said that his experiments only prove that hive-bees can become accustomed to go to and return from given places when attracted by certain colours. No experiments yet made have proved that bees prefer blue to any other colour; on the contrary, it is certain that the most inconspicuous flowers yield the largest amount of nectar to attract bees. This fact is well known to bee-keepers of any experience, and we shall be glad to publish the views of readers who have studied the subject.—EDS.]

EXTRACTING FROM BROOD-COMBS.

[6226.] *Re* extracting from combs in which breeding has taken place, would you be kind enough to give me your opinion on the enclosed? I may say it is an extract from Cheshire's "Bees and Bee-keeping," Vol. II., and reads as follows:—"Extracted honey from virgin combs is altogether the equal of that in sections, and, ultimately, such must it be. Formerly, muddy specimens, more the product of the aphis than flowers, could even squeeze their way into the prize-list; at that time the whole nursery went whirling round to get a few pounds of pollen-stained stuff; soon the mistake was seen, and, barring brood, we yet held to old brood-combs as being tough enough to bear extraction. Now the extractor is so improved that virgin combs can brave the ordeal, and since then those built on thick and wired foundation may be used; there is no fear at all that they will unduly suffer.

"The truth is better faced; the specks, tiny though they be, found in that from combs in which breeding has taken place consist mainly of larval excrement, a fact which will convince the far-seeing that I am urging no fancy, but that which has much to do with the development of the popularity of honey itself, a popularity which will continue to grow unless blind folly prevent."—I send name, etc., for reference, and sign—EXTRACTING, Belfast, February 19.

[Since the lines quoted from Mr. Cheshire's work were written (some twenty years ago) the art of bee-keeping has made considerable progress, the frames of brood-nests being now seldom used for storing surplus honey, consequently the objection to their use is less weighty at the present day than formerly. On the other hand, we are entirely in accord with Mr. Cheshire so far as regards the advantage of having surplus honey stored in combs that have never contained brood, and our views thereon have been recorded in print many years ago; in fact, it is one of the strong points in our advocacy of the shallow-frame for extracting when honey of high class is desired.—EDS.]

("*Correspondence*" *continued on page* 86)

HOMES OF THE HONEY BEE.

THE APIARIES OF OUR READERS.

The apiary shown—with its owner—on opposite page finds a place in our "Homes" somewhat earlier than originally intended for the reasons given by Mr. Greaves in the final paragraph of the following notes, where we read of his intention to make his home in Canada. In heartily wishing our friend "good luck" in his new sphere, we can testify to his chance of doing well with the bees, having tested his ability at an examination held in October last. Nor have we any fear of his not being welcomed by bee-men wherever he may settle down. He will also, we trust, be able to show that British methods of management will be as successful in our colonies as in the old country.

"My interest in bee-keeping took a practical form some six years ago through reading an appliance-maker's catalogue. I first bought a couple of swarms from a friend for 2s. 6d. each, and then ordered two frame-hives. After waiting impatiently for a fortnight, I managed to get them, and hived the bees in them all right. I next began to take the B.B.J. and *Record* (I had to walk at least two miles each way in order to get them), and therein I saw advertised the "Guide Book," which I bought at once. These I studied well, and from it—along with your Journals—I owe my success as a bee-keeper. The same year, however, I

had to move from Herts—where I was then located — to Sussex, and now arose the question: How am I to pack the bees? So after considering the matter for some time, I nailed the hive sides to the floor-boards, but this did not answer at all well, for when, at the railway station, the guard picked up one by taking hold of the roof the nails gave way, the heavy weight being too much for them, and out came the bees with a rush. The guard, who was an old school-chum of mine, beat a hasty retreat, and I had to fix the bees up as best I could, and get them into the guard's van, in which there was an Irish terrier in the corner, who

MR. MARK GREAVES' APIARY, UPSHIRE, WALTHAM CROSS, ESSEX.

didn't take kindly to the bees at all. I travelled in the van with the guard, and there were bees everywhere. However, when we changed trains, I got the hives out and made the bees secure before re-starting our journey. You may imagine my horror on arriving at our destination to find one hive on its side, and bees and combs all smashed in a heap, the hive broken, honey running from it, and a total wreck! I put the matter before the station-master, and put in a claim, and received the amount asked for the damage.

While living in Sussex, I drove 80 lots of bees; some I kept for my own use, and the rest were sold through an advertisement in the B.B.J. I had orders from Scotland and elsewhere. I packed them in boxes with a piece of perforated zinc, after feeding them well with syrup, and they went all right.

One year I made some exhibits at our local flower show, and took two second prizes for honey; this I easily sold at 1s. 3d. per lb. Having an observatory hive, I stocked it with bees and queen, and put it with the collection of honey. The display was greatly appreciated by the visitors, who seemed much interested.

In 1904 I left my location and came to Essex, near Epping Forest, but this is not so good a district for honey as Sussex. I lost one swarm last year. I was away the day before, and on going down next morning, at 9 a.m., I was just in time to see them fly away. I could not follow them, so I divided up the stock into nuclei, and reared two young queens; these I made use of in re-queening the old stocks, taking away the old queens a day or two before. I found this plan answered very well. In September I went in for a third-class certificate, which I am pleased to say I have got. I have now sold all my bees, etc., and am leaving in a few days for Canada, where I hope to continue my bee-keeping. All my success is due to the help and advice I have had from our Editors through the B.B.J. and "Record," and, I wish both journals may prosper.

CORRESPONDENCE.

(*Continued from page* 84)

THE STANDARD FRAME.

[6227.] Perhaps you will allow me to make my position a little clearer with reference to the above. I neither advocate nor hope for the immediate abolition of the B.B.K.A. standard frame and its replacement by the 16 in. by 10 in. What I do plead for is that the parent association will extend the "helping hand" of official recognition to the latter frame as an alternative to the "dual" standard.

It will at once be seen that this in no way forces the larger frame upon bee-keepers, its use or disuse being entirely optional. At the same time, I think it behoves experienced bee-keepers to test these frames thoroughly for themselves.

Mr. W. Allen (6209) says that "serious inconvenience will be caused to bee-keepers and appliance dealers if the size of frame is altered." But, if the matter be placed on the footing I have indicated, the alleged inconvenience is reduced to nothing; in fact, is purely imaginary. I have already dealt with bee-keepers themselves, and, for hive-makers, they would merely have to meet any demand there might be for the larger frame without necessarily any prejudice to the frame at present in use.

I think I see Mr. Woodley smiling quietly to himself when he reads about Mr. Allen hinting at the possible dismantling of the hives, etc., he has now in use! And the smile will broaden, too, when he is told that he will not be able to use and profitably work, say, 50 hives containing standard frames and 50 fitted with the 16 in. by 10 in. Could he not work the two sets of hives (and frames) in separate apiaries? And if in distinct apiaries, why not in one? Are we incapable of a little orderly classification about our work? I can quite see a little awkwardness where a bee-keeper has only a very few of each size of hive and frames in his apiary.

I crave Mr. Boxwell's pardon for being somewhat amused on reading his remark (on page 64) that "whatever section was chosen for a 'standard' it might immediately take the lead . . . . and shut out other sections, even though another may be found to be far superior." Why may not precisely the same argument be advanced against the adoption of a standard frame? Is it not true that the one disadvantage of "standardising" a frame or a section, or anything else, is that a "wet blanket" is, so to speak, thrown on any attempt at experimental improvement? Because hive-makers will naturally make or stock those frames and sections which, having the "sanction" of the B.B.K.A., are most likely to be used by the majority of bee-men, and, therefore, if a bee-keeper wants any other type he has to pay a much higher price for being "made to order."

In conclusion, I venture to suggest that, should the Association see fit to recognise the 16 in. by 10 in. frame as a "dual" standard, it be named (to prevent confusion) the "commercial standard," a name already applied to it by Mr. Simmins.—SAMUEL P. SOAL, Rochford, Essex, February 19.

ENEMIES OF BEES.

[6228.] From reading your publications I observe there are frequent references to the subject of "bee enemies," and from the valuable stores the bees gather, the guarding of their store-houses is one of the hardships of their little lives to which they must be continually exposed according to their environment. The fight for a living is at the root of it all, and although "man" is their greatest robber—paradoxical as it may seem—it is his duty to protect them from enemies as far as he can. When I first began to keep bees I had near at hand two colonies of the small black or "garden ant"; these I was compelled to destroy, for the ants were very fond of honey, and soon found out where to get it, although their nests were about thirty yards away from the hives. Some of the little creatures who migrated near the hives I still wage war against when found. If there are any weak stocks in an apiary, the most effective enemies of such are wasps and thieving bees.

The shrew-mouse (or vole) is apt to play the very mischief, especially at the beginning of the cold weather, but with the "W.B.C." hives one can keep them effectually outside if properly watched. We have here a great variety of bird life; sparrows, and even blackbirds, visit the flight-boards and the ground below hives to pick up all dead bees, both drones and workers. The male blue-tits (oxeye) do the same, and also carry off any weak bees that come within their reach. The large blue-tit catches the bees mostly when on the wing.

The "flycatcher"—Gilbert White's "Stoparolo" (Vol. II., p. 47)—is said to catch bees in flight; but although I had a nest of these birds this year beside the hives, and carefully watched, I never could detect them carrying off anything but the smaller insects.

The common toad (*Bufo vulgaris*) is very systematic in its methods. I kept one under observation for some time. In the early forenoon, when the worker bees were busiest, he crept cautiously and quietly along at the back of the hives and down the inclined bank on the left side, then climbed up the incline to his hiding-place,

about 3 in. outside of the plumb of the edge of flight-board, turning himself round into his "den," where nothing but his two bead-like eyes could be seen. Every now and then a heavily-laden bee dropped to rest for a moment on the grass, when, quick as lightning, his long tongue was out and forked the poor bee into his mouth. It was a great treat to see how the sly dog seemingly smacked his lips at every fresh mouthful.—D. M. W., Bridge of Allan.

DUMBARTONSHIRE AS A BEE COUNTY.

[6229.] The B.B.J. circulates so widely throughout the kingdom that I write this in the hope of its catching the eye of some bee-keeper in Dumbartonshire. I shall probably be removing next year from Kent to the west side of Glasgow, and having during the last two seasons made a successful start with bees, I am greatly interested in them, and naturally wish to know what prospect there may be of carrying on my bee-work in "fresh fields and pastures new." I should, therefore, feel greatly obliged if some Northern bee-man who knows the district—say, between Loch Lomond and Glasgow—will enlighten me as to its suitability for bee-keeping, mentioning, if possible, the most likely spots. My choice of residence will be somewhat restricted; but should I for any reason be unable to establish an apiary at home, I might make arrangements to run an out-apiary, if only a small one. I am very anxious to have some real heather-honey gathered by my own bees, and should be glad to know if this may reasonably be expected within a matter of ten or fifteen miles north of the Clyde. The nearer the Clyde the more convenient, so far as I am concerned.

Trusting some brother bee-keeper will be kind enough to send a few details regarding the district mentioned, I send name, etc., for reference, and sign—North Kent, Eltham, February 23.

Queries and Replies.

[3225.] *Bees and Flowers.*—1. I understand that bees are unwelcome visitors in the gardens of some who are lovers of flowers. The reasons given for this is that the bees visits to flowers cause the latter to run to seed more quickly, and in consequence it shortens the blooming-time considerably. I should be glad of a reply to this argument in B.B.J. I also ask: 2. If there were no bees in a district where fruit trees are extensively grown would there be enough wild insects about to fertilise the bloom? Or, is it because fruit trees bloom before the smaller insects are numerous that bees are considered necessary to the proper setting of the fruit? Bees will be pardoned for trespassing in flower-gardens if they are indispensable for fertilising the fruit-bloom. Anyway, it is better to have short-lived flowers than lasting flower-blooms and almost no fruit at all.—I send name, etc., for reference, and sign—C. P., Aylesbury, February 19.

Reply.—1. If lovers of flowers who imagine that bees do harm in the direction stated would make inquiry from gardeners who are also bee-keepers (and there are many such) with regard to the alleged damage done by bees they would in this way get at the facts from a grower's standpoint, and would, we trust, give up their animosity to the bees. For our part, we think the mischief caused is hardly appreciable, if it exists at all. 2. As for fruit-growers, we have it on record in our pages that one of our most extensive fruit-growers—who is also a bee-keeper owning a large apiary—attributes his exceptionally heavy crops of fine fruit to the proximity of his numerous hives of bees.

[3226.] *Queen Killed and Cast Out After Giving Candy.*—I should be very much obliged if you could tell me the probable cause of death of one of my queens. She was two years old, and fairly prolific. Yesterday morning, being fine and warm, I gave each of my stocks a cake of candy. In doing this I placed the candy carefully over the feed-hole, so that I could not possibly have crushed or damaged the queen should she by any chance have been right at the top of the frames; nor did I shift any frames, but simply turned back the corners of the quilt to glance at the stores, which, by the way, were very scanty. In the afternoon I noticed a lot of bees running about the alighting-board in a very excited manner, and on going to ascertain the cause I discovered the queen on the ground dead! There was a wound on the abdomen, which had the appearance of her having been stung, but surely this could not have been the case? I regret not being able to send the dead insect for inspection, as I mislaid same. Will you kindly advise me what course to take in order to preserve this stock? I send name for reference, etc., and sign—J. E. B., Purley, Surrey, February 26.

Reply.—From details given it seems fairly clear that the queen has been killed during the operation of giving candy. The excitement of the bees at losing their queen shows that her death was caused by an accident. Besides a sting would not cause

a visible wound on the abdomen. The only methods by which bees may be utilised at this season are:—1. To unite them to a weak stock. 2. To purchase, if possible, a fertile queen for the queenless lot. 3. To buy a nucleus colony headed by a young queen.

[3227.] *Golden Italian Bees.*—I have tried the "Golden Italian" bees the last two seasons, and find that they have a tendency to lose their queens in a mysterious manner. They are also more restless than the ordinary native bees? Can you tell me the reason of this? The first season I lost two out of three stocks. The following season I bred five queens from the one left and bought two others. The five were successfully mated, but lost two out of this lot. The other day, being fine and warm, the bees were flying busily; I soon noticed the bees running backwards and forwards at one stock, so I came to the conclusion: "Another queen lost!"—J. N. Nunewick, Humshaugh-on-Tyne, February 26.

Reply.—We should like to know whose strain of "Golden Italians" you have tried before pronouncing on the above, and will be glad to have a reply first. We have never heard of the bad qualities you refer to being specially attributable to the strain mentioned.

[3228.] *Increasing Stocks.*—Would you kindly give me your valuable advice re the following?—In the enclosed rough diagram the five hives (marked A to E) are established stocks, A and D each having an Italian (1905) queen at its head. I am desirous of Italianising all stocks, and at the same time to increase the number from five to eight, and so I ask: How and when can this best be done? It may assist you to know that A was my best stock last season, giving me eighty-five 1-lb. sections and about 12 lb. of extracted honey, and it has come through the winter strong and healthy with about four standard frames of store in hand. D was a swarm from C, with an Italian queen which had been introduced only three days before. F, G, and H are the proposed stands for the three new stocks. Thanking you for past favours, I send name and sign R. G. A., Hampton Wick, February 24.

Reply.—Assuming that you have the "Guide Book" at hand, or have sufficient knowledge of queen-rearing to carry out the necessary operations, your best course will be to get a comb of eggs from A, as containing your best queen; this done, insert the comb—after due preparation, of course—in a less valuable stock for raising queen-cells from the eggs given. Then, when these cells are sealed over and ready for removal, prepare as many nucleus hives as you need to make up the desired increase by dividing the stock in which the queens are being reared, and give a ripe cell to each, leaving a good one for the colony that has been broken up by division.

[3229.] *Nectar and Honey—Rearing and Introducing Queens.*—Will you kindly tell me through your valuable journal: 1. The difference in origin and nature between nectar and honey? 2. What you consider the best way of rearing queens? 3. Is "direct introduction" of queens as safe, in your opinion, as if queen is caged on the combs, as advised in "Guide Book"? There seems so much difference of opinion amongst bee-keepers round this district with regard to questions two and three that I feel it will be a boon to all readers of your journal, including myself, if you will kindly favour me with an answer. Wishing the B.B.J. every success—Busy Bee, Evesham, February 22.

Reply.—1. Nectar is a thin, sweet liquid—containing several sugars—secreted by flowering plants, and collected therefrom by bees, to be by them converted into honey. The exact process of this conversion is one upon which scientists are not perfectly agreed; but what is certain is that a chemical change is brought about which converts the cane-sugar (or levulose) of nectar into the grape sugar (or dextrose) of honey, and renders the latter one of the most wholesome of all foods. 2. The best way of rearing queens we know of, for an ordinary bee-keeper, is that described fully in the "Guide Book." Those who desire to try the more advanced methods should read Mr. Sladen's book on queen-rearing. 3. In capable hands "direct introduction" is safe enough for all practical purposes; but even old hands prefer the caging plan when introducing valuable queens. So this fact must speak for itself.

[3230.] *Syrup Food for Spring Feeding.*—In the autumn of last year I made some food for bees according to the recipe of B.B.K. "Guide Book." This food was not all used. Can I use it for spring and summer feeding? And if so, should I alter it in any way, and how? Reply will oblige.—A Beginner, Olney, Bucks, February 24.

Reply.—The syrup will be quite usable if thinned down slightly with hot water.

[3231.] *Drone-breeding Queens.*—Yesterday my bees were flying freely and enjoying themselves in the sun, although the cold wind brought down many to the ground. I picked up about forty quite exhausted, but after placing them in a glass and warming them in front of the fire, besides giving them just a drip of honey, they revived, and flew to their hives. I was greatly surprised, on watching one hive, to see several drones flying in and

out. This stock last September retained their drones, and I at once concluded that it was queenless, so, having no queens on hand, I at once decided to purchase one in order to gain time. I introduced the new queen after being caged on the combs for twelve hours; I released her, at the same time spreading a sheet in front of hive in order to see if queen was thrown out. In less than five minutes the queen was hurled out dead! I at once concluded that a young queen had been hatched, and decided to overhaul the hives. I found a young queen and the empty queen-cell. I examined the hive in October and found a nice patch of eggs and larva. I fed up well, and contented myself with the thought that they were all right for the winter. Now, Sirs, my question is: Are these drones the same as those in the hive in October, or is it a sign that the hive is very forward and the drones this season's breeding? I have not examined the combs, but the bees seem very numerous to-day when flying. I have never had a case like this before—that is, drones flying in February—and should like your opinion on the subject. — A. W. Crouch End, N., February 26.

REPLY. — From the symptoms detailed above, it is fairly safe to say that the stock was not queenless when the purchased queen was introduced in September; the probability being that the young queen found later had hatched out when the caged alien queen was released. The subsequent discovery of eggs and larvæ, however, does not prove that the young queen had been fertilised. This is the crucial point of the case, and can only be decided by examining the combs for worker brood. If drone brood only is found the stock may be set down as of little value through being headed by a drone-breeding queen. Should this be so, the bees had better be united to another colony without loss of time. If you had studied the "Guide Book" carefully no confusion or uncertainty would have arisen in your mind on the points raised.

TRADE CATALOGUES RECEIVED.

JAS. LEE AND SON, *Head Office and Works, Martineau Road, Highbury, London, N.*—The addition of the late Mr. J. H. Howard's business to that of Messrs. Lee has enabled the firm to make some notable additions to their well-known list of bee goods for the present year, the production of "British Weed Foundation" being now a speciality with them. It is made on the machines formerly used at Holme, Peterborough.

Without being inordinately long, the list before us embraces everything needed in the apiary, as well as many specialities invented and introduced by Messrs. Lee themselves. Nothing of value in either bees or bee goods is omitted from the catalogue, while very full directions are given for the guidance of purchasers, with sketch-map plans of the routes to works at Highbury, and show-rooms at Silver Street, High Holborn, W.C.

Messrs. Lee, having disposed of their apiary at Andover to another firm, have now established a bee-farm at Fulbourne, Cambridge, where swarms, stocks, queens, etc., will be obtainable during the season to order. We also note that Messrs. Cairncross and Zillen, Church Street, Pretoria, are agents for Messrs. Lee's goods in South Africa.

E. H. TAYLOR, *Welwyn, Herts.* — This catalogue is stated to be almost double the size of former editions. The copy now before us (containing 88 pages) is mainly devoted to bee-keeping and the various appliances connected therewith; it also includes bee-houses, and a novelty in trade lists in the shape of trophy stands for exhibition purposes. A full list of goods used in poultry-raising is also given, including houses, chicken-coops, incubators, and dog-kennels. Mention should also be made of the copious "Hints on Successful Bee-management," occupying seven pages of the catalogue. We see that Mr. Taylor makes a special feature of his experience in establishing bee-farms in various parts of the world, and has founded a depôt at Johannesburg for South African bee-keepers, as well as agencies in London and Newcastle-on-Tyne.

R. STEELE, *Wormit, by Dundee.*—In this neatly-got-up list of 64 pages Mr. Steele naturally caters for Scottish bee-keepers, the hives shown being of rather heavier build than those usually seen in the South. All appear to be useful hives, moderately priced, and will, no doubt, be much approved by those who like a good size protective porch suitable for exposed situations. Mr. Steele includes some useful instructions to beginners in bee-keeping, tersely told, and very much to the point. The catalogue also comprises a full list of poultry appliances, incubators, etc.

S. J. BALDWIN'S APIARY, *Bromley, Kent.* —This list of 52 pages is entitled "The Bee-keeper's Instructor, and complete new catalogue for 1906, price 2d., post free." In it, however, the methods of the late Mr. Baldwin are closely adhered to and followed, consequently there is less mention of new ideas than is usual in such lists; but, having the "Instructor" before him, any reader will be able to follow out Mr. Baldwin's directions easily and readily. The merit claimed for the goods mentioned is quality rather than cheapness, a point which is always worth consideration.

Notices to Correspondents & Inquirers.

Letters or queries asking for addresses of manufacturers or correspondents, or where appliances can be purchased, or replies giving such information, can only be inserted as advertisements. The space devoted to letters, queries, and replies is meant for the general good of bee-keepers, and not for advertisements. We wish our correspondents to bear in mind that, as it is necessary for us to go to press in advance of the date of issue, queries cannot always be replied to in the issue immediately following the receipt of their communications.

BEGINNER (Brentwood, Essex).—Starting Bee-keeping.—Of the queries to which a reply is requested in this column we can only answer No. 3, which reads: What month should I buy a swarm? Consult our advertising pages about mid-April, when swarms are advertised, and order a good natural swarm for delivery early in May if possible. This will ensure a good place for orders, booked in advance. Nos. 1 and 2 obviously cannot be answered in the B.B.J. without doing injustice elsewhere. There is no "best firm" to deal with, and no particular hive that "we would recommend" before all others. If help or guidance is desired in these directions refer to the "Guide Book" and its advertising pages.

FREDA (Oundle, Northants).—Non-swarm-hives.—1. The hive named is not at all suitable for a lady beginner with bees, and would probably lead to trouble or failure in your attempt to use it. 2. The Carniola bee is quiet to handle, but has a habit of swarming unexpectedly when the bees are not skilfully handled. 3. Most bee-keepers prefer the smoker for general manipulations, but the carbolised cloth is very useful at times. 4. "Clipping" queens prevents the insect from flying, so that instead of rising in the air with the swarm the maimed queen falls helpless to the ground in consequence, and the bees return to the hive, and if not rescued the poor queen dies. 5. Do not locate the hive where the gardener works most, because if afraid of bees he would be almost sure to get stung. The best frontage for the hive is south-east, but a less favourable aspect will do. 6. It would be advantageous for you to join the Northants B.K.A., whose hon. secretary, Mr. R. Hefford, Kingsthorpe, would no doubt try and get you some practical help and advice on the spot.

W. E. C. (Bromley Common).—Damp Quilts in Early Spring.—We advise raising the hive-roof by adding a "lift" so as to allow a free current of air between the quilts and "flat-top" of roof. It would seem as if the "drip," you complain of, as falling on quilts, arises from condensed moisture caused by the warmth of so many as eight thicknesses of felting.

F. H. H. (Warwick).—Bees Found Dead in February.—In comb sent there are one or two suspicious-looking cells, but the contents had dried up and disappeared entirely. The dead bees found head-foremost in the cells have died from hunger alone (not disease, as supposed). It is not at all safe to rely on candy alone for keeping bees alive in winter, seeing that in very cold weather they may die for want with candy within a few inches of the cluster.

J. J. S. (Cornwall.—Painting Hives in Early Spring.—No anger to the bees will arise if the hives are painted on a day when it is too cold for bees to fly abroad. The entrances should be closed while painting the hive fronts, to prevent odd bees coming forth while the work is in progress.

H. HILL (Derby).—Bee-forage Plants.—Berberis Darwini is an excellent plant for bees, and a hedge of it would be very useful and attractive to them while in bloom.

SUSPICIOUS (Olton, Birmingham).—Sugar for Bee-food.—Only analysis would prove whether sample is pure cane sugar or not. A reliable grocer could answer your question, because of knowing what he purchases from the refiner.

H. F. (Canterbury).—Insect Nomenclature.—The small insect sent is a fly, and what has the appearance of a sting will be the ovipositor.

*** *Some Queries and Replies, &c., are unavoidably held over till next week.*

Special Prepaid Advertisements.

Twelve words and under, Sixpence; for every additional Three words or under, One Penny.

Advertisements for current issue must be received by first post on Tuesday.

A NICE COLLIE BITCH FOR SALE, or exchange for Bee appliances. — CUNNINGHAM, Stetchworth, Newmarket. N 42

BEE FOOD, SEEDS.—Chapman Honey Plant, Limnanthes, Bokhara Clover, each 6d per packet, 1s. 4d. three; carriage paid. Splendid Bee Forage.—BAYLEY, Fair View Apiary, Sellindge, Hythe, Kent. N 24

"BEE JOURNAL" FOR SALE, last six volumes, unbound.—J. WHYMARK, Wiston, Colchester. N 38

BEES.—Seven Stocks in Hives for Sale, 16s. each; owner having left the district wishes to sell.—Can be seen on application to MR. J. PALMER, The Homestead, Bassildon, Essex; nearest station, Pitsea. N 32

BEES.—Two Strong Stocks, headed by June, 1905, Queens, in large (double) modern Hive, nearly new, £3.—MRS. HARLING, Chelsfield, Kent. N 27

BEES.—Strong Stock, with young Queen, in nearly new modern Hive, 30s.—MRS. HARLING, Chelsfield. N 29

Editorial, Notices, &c.

THE BEE-TENT IN SOUTH AFRICA.

We print in this issue (page 94) a letter from a reader located in South Africa, in which mention is made of American bee-goods as being preferable to those of British manufacture. We do not, in any way, question the motive which may have prompted the communication referred to; but, broadly speaking, there seems to be an implied desire on the part of our friend that American methods of bee-management should have preference over those of the mother country. There is, of course, no great cause for complaint in this if any particular advantage to our colonial brethren was secured thereby, and it is here where a difference of opinion may be allowed.

We hope our correspondent will not complain of our omitting the few lines of his interesting communication which refers to the letter of Mr. H. M. Meyler, in B.B.J. of June 15 last. In that letter Mr. Meyler's main point is not whether British or American-made goods are best or cheapest, but whether or not the British "standard frame" should be one adopted for general use in South Africa. There is surely nothing wrong in our agreeing with Mr. Meyler in his hope that British methods of bee-keeping and British-made hives should have a chance of adoption in our own colonies. Nor do we suppose that our correspondent has any special desire that American manufacturers should "scoop" in the whole bee-appliance trade of England and all her colonies! any more than our American friends would not give the methods of mother country a chance with her own sons who are bee-keepers. Anyway, we are glad to say that our old friend, Mr. J. Martin, who is a B.B.K.A. expert and still retains his love for British methods of bee-management, will be giving lectures and demonstrations with bees at the coming show of the Port Elizabeth (South Africa), Agricultural Society, to be held there early next month; and in order to make a feature of the bee-section of the show, the Society has entrusted us with an order to obtain a bee-tent and complete outfit, similar to those used at shows held under the auspices of the B.B.K.A. The tent and all appurtenances was despatched to Port Elizabeth by yesterday's steamer, and will afford an opportunity for South African bee-keepers for judging of British methods, which we think will not be lost on them.

The Cape Colony Bee-keepers' Association, at whose request the Agricultural Society is providing the tent, etc., will have an opportunity of showing British methods of bee-management in its latest form. We have done our best in arranging that the equipment sent out should be up-to-date, and in this we had the valuable assistance of Mr. W. Herrod, who has, we suppose, had more experience in lecturing and demonstrating with live bees at shows than anyone in this country. The result will lie in the capable hands of Mr. J. Martin, who specially requested our help in making a success of the first appearance of the bee-tent in South Africa.

GLAMORGAN B.K.A.

ANNUAL GENERAL MEETING.

The annual meeting of the above was held at Swansea on February 24. F. W. Gilbertson, Esq., J.P. (vice-president) presided over a satisfactory attendance.

Letters excusing absence were read from the president, the Earl of Plymouth; Major-General Lee, Alderman T. J. Hughes, and Colonel Oakden Fisher.

The congratulations of the meeting were heartily accorded to the president on his elevation to the peerage.

The adoption of the report was moved by the chairman, who said he was always ready to assist the work of the Association, which was flourishing so satisfactorily. Bee-keeping as a hobby had amply justified its existence, and since the visits of the experts it had become very profitable. A substantial addition to the list of members had been made last year. It appeared, too, that the Cardiff show was a decided success, although the season was only a fairly good one. The touring experts had examined six hundred and eighty-six hives, and found foul brood more or less virulent in 20 per cent. of them.

The income for the year was considerably more than that for any previous year, and the balance-sheet showed a sum of £32 in hand.

The balance-sheet and the report were passed *nem. con.* The following officers were appointed: President, the Earl of Plymouth; twenty-six vice-presidents; auditor, Mr. J. Jenkins, A.C.A.; treasurer, Mr. W. T. Watkins Lewis, J.P.; hon. sec., Mr. William Richards. As the result of strong feeling existing in all parts of the county that only a limited portion of the county had representatives on the executive committee, it was resolved that the county be divided into twelve districts, and a representative from each district was then elected. It was also agreed to hold the committee meetings at various centres, instead of confining them to Cardiff.

On the conclusion of the business, re-

freshments were handed round. In the evening Mr. J. W. Brewer gave a lantern lecture on "Successful Bee-keepers" and "Queen-rearing." Many of the slides had been specially prepared for the lecture, which proved to be useful and interesting. —WM. RICHARDS, Hon. Secretary, Red House, Gabalfa, Cardiff, February 27.

Correspondence.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

**** In order to facilitate reference, Correspondents when speaking of any letter or query previously inserted will oblige by mentioning the number of the letter as well as the page on which it appears.*

AMONG THE BEES.

SOME EARLY SPRING NOTES.

[6230.] *Feeding Bees in Spring.*—Doctors differ. Mr. "S. D. Charing" (6197, p. 54). The other day Mr. Alexander, one of the giants in beedom, described in *Gleanings* how by feeding his bees 50 cents.' worth of food per hive he was able to work up 100 colonies, so that by the end of May he increased to 200, and about the end of June to "300 colonies all together." Not only so, but he secured 30,000 lb. of surplus (theoretically, I fear) yielding a clear net balance of over £400 (on paper). In this country we deal more by tens than by hundreds, but proportionately the same rule should hold good. My experience is so very limited, placed alongside of Mr. Alexander's, that I am chary of even expressing an opinion. If, however, I were asked advice, would say — Try the experiment on *one* stock. You will get your proportional increase, I doubt not, but as to surplus it would here be microscopic in the extreme.

Our friend "S. D." rightly concludes that I do no spring feeding, but he must remember two facts as a corollary to that statement. I work for the heather principally; therefore spring stimulation would bring my colonies to the crest of the wave too soon, and I leave a superabundance of stores in the hives in autumn. When I was learning my A.B.C. of bee-keeping, I was fortunate in having "useful hints" from a master in the art who is now, alas! reposing on some corner of the South African veldt, like so many other brave fellows. What he said was something like this: — "I have no wintering problem. 40lb. of pure honey left in the body-box of each colony, with plenty of young bees, a young queen, with a weather-tight hive, and plenty of overhead packing, *solves the problem.*" And so, I think, it does. Colonies left with a bare 20lb. of stores, and not over strong in bees, are almost certain to come out in spring in a weak condition. The strong colony, well provided, will come out in spring healthy and "fit." And it is my candid belief that no amount of candy given in winter, or no amount of spring feeding will make reparation for a lean larder when you winter pack.

This question, too, is closely allied with spring dwindling. Supply stimulative candy early in spring, or stimulative feeding a little later, and you have breeding going on out of due season—the season of repose. I would have all feeding overtaken as early in September as possible. Bees re-arrange their stores then to suit future contingencies, and all feeding should be over before they carry out this operation, in order that they may have time to ripen and seal the food. Indeed, a good deal of the success of the coming season's results were secured by this timely manipulation last autumn. Give bees ample stores, a warm watertight hive, plenty of bees, and I venture to say that colony should come out all right in May without any meddling or coddling. And yet, if I were in Kent, solecism though it may seem, I think I would spring stimulate.

Handling Bees.—The season is fast approaching when the first spring examination will take place. So a note on this subject may be appropriate. Handle gently! The ancients several centuries ago discovered this, and, in imbibing some of their wisdom, nothing impressed me more than what they have to say about gentle treatment of bees. Everything is done in such haste nowadays in this go-ahead age that rough handling too often, partly at least, accounts for the cross temper frequently complained of. Lawson says: — "Handle them quietly and leisurely, and their keeper, whom they know, may do with them what he will without hurt." Butler's advice is:—"Handle them quietly, and with as little business as you may." Southern puts it even more quaintly but emphatically:—"Goe orderly to them and thou shalt finde them gentle as sheepe." It is always interesting to compare the new with the old, so I quote from the latest. In the leaflet, "Advice to Beginners in Bee-keeping," issued by the Board of Agriculture, we read:—"It is advisable to wear a veil to protect the face and head, but the hands should be left bare. Their best protection is the *gentle, careful* manipulation of the bees."

When making this early spring examination, keep a sharp eye wide open to note the presence of brood, even in small patches.

If not seen, test for the presence or want of a queen. If strong in bees, requeen. If short of bees, unite. Make certain, however, that there is nothing present in the shape of a queen before introducing another. However useless she may be, the bees (unwisely) prefer her to the very best and most expensive queen you can give them. The finding of a queen, such as I am premising may be present, is at times a matter of considerable difficulty, because in shape and size she may differ very little from a worker. In searching, observe two rules:—Use very little smoke, and do not jar the hive. Never set the bees on the run, as I may call it, or you may as well shut up the hive and try some other day. In introducing these queens do not expect too much from the change. If you place her at the head of a mere handful of bees, or if you run her into a hive with old and useless combs, you only court failure, and send good money after bad. In nine cases out of ten queenless lots in spring are best added on to the neighbouring hive.

Centralisation v. Decentralisation. — I meant to deal with this, but the wise words of Mr. Allen Sharp (6196, page 54), fill the bill. My knowledge is limited, but if any centre exists in our country where over 100 hives could be located it is unknown to me. I fear 50 would overstock most localities.

"Takes of Honey." — There are more things in heaven and earth than are dreamt of in the limited philosophy of "W. W., Bucks" (6202, page 57). In here, never "rob the brood-chamber to the full extent of all the honey it contains." Indeed, we never rob it of any (see first section of this contribution), and leave as near as possible 40 lb. for winter stores; yet, working even for comb honey we very frequently exceed the century. "W. W." is "only a novice" (I feel much interest in the novice, and will devote a special article to him soon), but as he leaves the novitiate stage, he will find his horizon expand, his conceptions develop, and his mind broaden, while I trust, with more experience, he will yet frequently top 100 lb. *real* surplus. "*Fac et spera!*" should be his motto. I was engaged in bee-keeping for over ten years, I think, before I attained this pinnacle, and when I did it was certainly the proudest moment of my bee-life. This is a point for all junior members of the craft to aspire to.—D. M. M., Banff.

APICULTURAL NOTES.

[6231.] February has come and gone, and, from a bee-keeper's standpoint, has left little to complain of. Bees were seen flying on a few occasions, but for the most part the month has been damp, dull, and cold, with some half-dozen frosty nights. At such times quiet reigned throughout the apiary, which was no doubt the best condition possible for it; it had the beneficial effect of saving both bee-life and stores. All my stocks appear to be coming through well, and no signs of dysentery have appeared; indeed, since I adopted the plan of leaving entrances open full width all winter there has been little trouble in that respect. Now, however, when breeding is going on, and freedom from risk through dysentery, entrances have been much reduced.

Bees have been out in large numbers during the last few days, and these cleansing flights are among the best preventions against dysentery. I had not heard for a long time such a hum in the apiary as on Saturday and Sunday last. The merry hum of the bee is always a pleasant sound to the bee-keeper, but never more delightful than when it has been silent for five or six months previously. It makes one feel that spring-time is coming, and with it a generally critical time for the bees, for it frequently happens that more losses of stocks occur during early spring than all through the winter. The present season also reminds one that the time is near at hand when those who wish to secure best results must be "up and doing." I am glad to say, however, that nothing will need doing with my own bees during the present month beyond seeing to the food supply, and this with as little disturbance as possible.

The question was asked in the JOURNAL a few weeks ago if felt is a suitable covering for hive-roofs. I answer "Yes." It makes a splendid cover if the right sort is used. It should be smooth, close-made, and about the thickness of ordinary shoe-leather, stretched tight over the roof, and firmly fastened under the edge all round with flat-headed tacks, and well painted. The felt absorbs a lot of paint, and it should have a fresh coat once a year. If that is attended to the roof will last for years, the inside always being as dry as a bone. It is warm in winter, no hotter in summer than a wood-roof, and not nearly so hot as zinc. Some of mine have been in use for ten years. Last year, however, owing to pressure of work and other hindrances, the usual spring painting was neglected, and, consequently, in some cases the old paint cracked and let in the wet, and caused the felt to rot. I now have to re-cover a good number, and am using "Buckram," as recommended by Mr. Fred Evans in B.B.J., January 11 (6166, page 17). This makes a neat cover, does not absorb so much paint as felt, and will, I should imagine, be quite as durable. Anyway, I am giving it a trial. The roofs referred to are some of an old pattern I had left on hand. The bulk of my roofs are so

made as to shoot off the rain easily, and require no covering beyond an occasional coat of paint.

My contention — based on long experience as a bee-keeper and hive-maker—is that if a roof is properly designed, and made up of suitable material, there ought not to be any trouble through leakage. The majority of hive-roofs that I have seen in various parts of the country are too flat, in my opinion, and do not shoot off the wet nearly so readily as those made on a sharper angle.—ALLEN SHARP, Brampton, Huntingdon, March 5.

BEE-KEEPING IN SOUTH AFRICA.

BRITISH METHODS OF MANAGEMENT.

[6232.] As a regular reader of the B.B.J., and from the use of which, and that of the "Guide Book," I owe any success in bee-keeping that I have achieved, I take a great interest in all discussions that take place within it. In your issue of June 15 last year (page 232), I saw a letter from Mr. H. M. Meyler, Utrecht, Natal, headed "British bee-goods in South Africa," in my opinion, American hives hold first place here on account of their cheapness and finish. I have now 15 American dove-tailed hives at work, and they cost 12s. 6d. each. My only English hive cost £6 10s., was very roughly finished, especially the shallow-frames, was not planed inside, and its walls were not ½-inch in thickness. I put in a strong swarm, but for two seasons obtained very little surplus. I, however, have been quoted very much cheaper, by importing direct.

Last season, my best hive gave me 63 1-lb. sections, and 28lbs. of extracted honey. The present season (Jan. 10), now in full swing, promises to be a record one with me; my best hive, so far, yielded 67 sections, with every chance of another rack full. I always get 1s. 3d. per 1-lb. section.

There are three distinct honey flows in this district, viz., August, November, January. The August honey, however, is not fit to eat. We have no foul brood in the Colony, but I am sure it will come, as I notice that swarms are continually being imported without any regulation or undergoing quarantine. When the disease comes it will never be eradicated. There are in this country thousands of wild swarms to every single stock in a hive. We find them in the roofs and walls of houses, in old tins and boxes, and even in the hollows of the electric tram poles along the thoroughfares; so what chance, I ask, is there of dealing with a bee disease such as foul brood? The native bees here are good enough without importing others. I often see accounts of their viciousness, stating that without cause they "come out" and sting everything within reach. I do not believe it. They do, at times, give trouble by attacking animals, but certainly not without any cause at all, as some state. For instance, a few months ago, I saw a horse grazing a few feet away from a hive of native bees; suddenly he rolled, then jumped up and "bolted" away over the veldt. He had evidently done something to rouse the bees to begin a vicious attack on every living thing within reach. I immediately poured a bucket of sheep-dip over the hive, which quickly subdued them, but not before they had killed 15 valuable fowls. You cannot combine fowls and bees in this country. They are certainly more vicious than the English bee, but I find them greater cowards and more easily subdued. On warm, sunny days, they are easily handled, but in cloudy weather, and towards evening, they are most vicious. We have also another variety of bee, small, black, vicious, and with great swarming propensities.

I have many times come across Mr. J. Martin in this country, and find that he, as bee-expert, used to visit my father's apiary in Somersetshire. It is expected that he will give a lecture at the coming agricultural show at Port Elizabeth. — W. H. E., Port Elizabeth, South Africa, January 10, 1906.

[Please refer to our leader on page 91. —EDS.]

LOOK TO YOUR STOCKS.

THE DANGERS OF DELAY.

[6233.] At the risk of being thought an alarmist or a bore, I want to say, it being borne in upon me by my own experience, that I *must* say an emphatic word to those youngsters in our ranks who, whilst not exactly in their first season, are yet beginners, and who are perhaps at the most dangerous age, in that they have already learnt somewhat of the ways and needs of their bees, and may indeed presume upon their knowledge. The winter that has just passed—if one may ever be reckless enough to assert that it *has* passed—has been exceptional, and in its very mildness lies its danger, as stocks may have consumed their stores owing to their greater activity, and it behoves every bee-keeper worthy of the name to investigate at once, if he has not already done so; and, indeed, even if he has, to make sure that his bees are safe for weeks to come.

I must confess that I had thought that my own hives were well packed and provided, but yesterday I turned the quilts of

(*Continued on page* 96.)

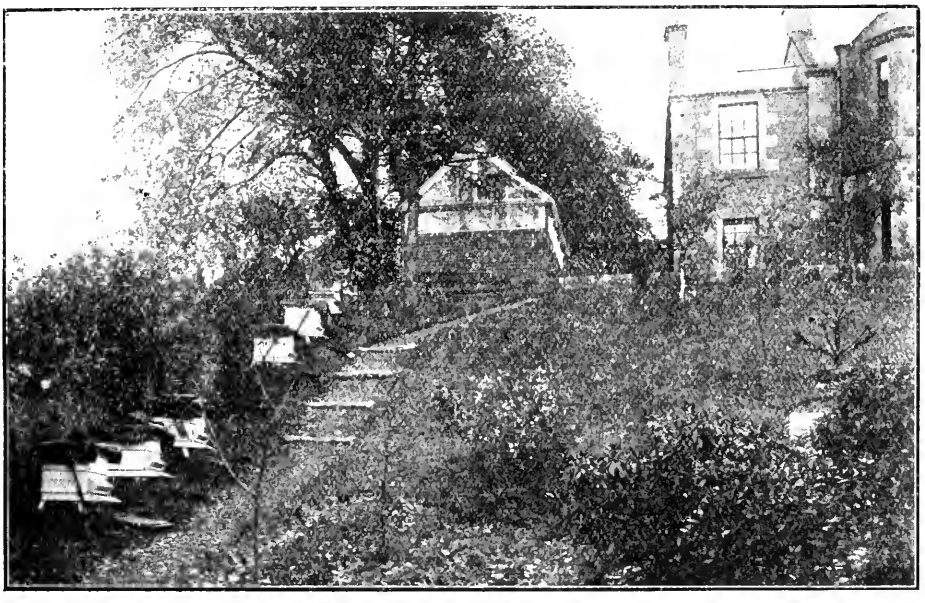
HOMES OF THE HONEY BEE.

THE APIARIES OF OUR READERS.

The picturesque little apiary seen below is that of a reader whose bees are his "hobby." Our friend is also a great lover of natural history, and especially of bird-life, as has been shown by the letters from his pen that have recently appeared in our pages. About his bee-work, the following notes speak for themselves. He says:—

"In response to your request for a few 'notes' to accompany the view of my bee-garden, I may say I began bee-keeping in 1900 with one small old-fashioned box-hive about 12 in. square by 9 in. deep. This has never yielded more than 10 lb. to 15 lb. of honey in any year, and when it swarmed in 1902 the bees flew off and were lost. On the other hand, each of the 'W.B.C.' hives seen in photo, as prepared for wintering, have yielded at least four to five times that weight of honey every year as they got established. The hives have a southern exposure with a 7-ft. stone wall and a row of plum trees behind protecting them from the north winds. Within easy distance we have a fruit farm of over 100 acres planted with apples, pears, plums, rasps etc., and a wide extent of land laid down in grass and white clover. Two miles away there is plenty of heather, to which pasture some of our bee-friends send their bees every year; but 1905 was a partial failure, and did not pay expense. Last year, after the honey-flow was over, I was away from home, and in my absence I lost—through wasps—a nucleus hive in which I was keeping a young queen for future use. Another mishap from want of personal attention at the time was an attack on my original small square hive, which was 'robbed out' by some golden Italian bees from a neighbouring apiary. All the other hives seen are well stocked for winter.

"The bees are a study and a 'hobby' to me. I read all the standard authorities on them that I can lay my hands on, from Lord Avebury to your own publications, and every week receive useful information from the B.B.J. Bees, however, seem different from all other hobbies. There is no finality, for the more one learns the more we find wider fields to explore.



MR. D. M. WATSON'S APIARY, SUNNYLAW HOUSE, BRIDGE OF ALLAN, N.B.

"I have no experience of the profit side of bee-keeping, never having sold any honey, but if I took into account the honey used for our own house table, and that given away to friends at the lowest price per pound, it would more than cover the capital expended.

"Several of our thrifty working men bee-keepers here do very well, they tell me, realising 10s. to 12s. per doz. for 1-lb. sections or 1lb. jars of extracted honey. In conclusion, I may say the white object on the right in photo is a watering-trough for the bees, with perforated floating board. In this they have always a plentiful supply of water all the year round.

"I hope to write you again on my experiences with what are called 'bee evenings,' in which I take much interest."

("*Look to Your Stocks*," *continued from page* 94.)

all, and found one colony at the point of extinction. The bees were almost motionless, and only here and there a moving leg showed that they had recently been other than a community of corpses, while the queen, packed up carefully as she was in a lump of bees, showed signs of life.

So the whole heap was promptly taken to the kitchen fireside, placed in a large wire-screen hive made for this amongst other special purposes. The combs, to which some bees still clung, were placed between warm combs of stores, and presently a large proportion of these, and, alas! *some* of the heap, were active and fed. This had been a strong stock, with a fair amount of store, but it had exhausted the contents of the combs by its very vigour and early activity. The erstwhile strong lot is now, however, by comparison a nucleus only, and has been returned to its stand with a mark as wanting special care. It is doubtful whether it will live through the spring; but at least another day of inattention would have placed it beyond the reach of want and care.

Now, this should not have been allowed to happen, and when such melancholy happenings do occur the apiarist has himself alone to blame, and there is no valid excuse for him. I scourge myself thus publicly to remind those others who think they stand, to take heed lest they also fall. *Look to your stocks.* Look to them *now.* Do not allow any favourable or partly favourable opportunity for examination to pass. If I may repeat myself, a shade temperature of 50 deg. Fahr., without wind, will safely allow of brood-nest examination; but inspection sufficient for the purpose may be made with a lower temperature—say, 47 deg. If the sun is shining upon the hives the bees will be flying, but the thermometer is the most reliable guide.

Most of the text-books rightly emphasise the fact that bees should be disturbed as little as possible until spring, and it is for fear lest the admonition may be to some an excuse for neglect that I would urge, and again urge you, whether you are satisfied or not, to look to your stocks. If they are all right, well and good; pack them up with extra covering, be thankful, and let well alone. If not the sooner you know it the better. Is it not worth your while to make a special effort at mid-day upon the first favourable day? I shall be well rewarded for the trouble of reminding if only one colony of bees is saved by the effort. If the day be cold, candy is improved by an hour's gentle warmth; but if stored combs are given it is important to warm them first, and the best place to warm them is upon the kitchen mantelpiece for half a day, or in a warm cupboard, NOT, it is perhaps superfluous to say, in the oven.

A fresh set of warmed quilts are well worth the trouble of preparing them, and every bee-keeper should have a spare supply of these. My ideal quilt is a square of flat carpet which just fits a square hive, and if the quilt contains two feed-holes 2 in. diam. and 2 in. from centre placed respectively north and east, it is, to my mind, perfect. Two such quilts make a good covering at ordinary times, and they may be placed so that both holes are covered, or one or both open, for feeding purposes, while in spring the cluster is often within reach of one of the holes without disturbance of the quilt. Get some new carpet remnants, or some old clean ones, for the matter of that, at once, and make some spare quilts in this fashion, and I think that you will like them.

But it is all very well to have plenty of apparatus, and be ready with supers, and so on; but if the stocks themselves are neglected now the furniture may be of no use later. So, at the risk of being wearisome, I must repeat, LOOK TO YOUR STOCKS! —L. S. CRAWSHAW, Ilkley, Yorks, March 5.

THE STANDARD FRAME QUESTION.

[6234.] I did not intend to enter into the discussion of larger frames for brood-nests this time, having little to add to what I have already stated in your pages on the subject. But as our friend J. M. Ellis, in his letter headed "The Large Frame Bogey" (6222, page 83), asks if I am still getting best returns from large brood-nests, I at once answer yes. I have used the "Standard" and 16 by 10 frames side by side for between eighteen and twenty years; but I had large frames before I knew there was such a thing as a "standard." My stock of hives in which the latter are used has dwindled down to six, though once I had over twenty of them. There is now in my apiary over forty stocks in hives taking the large frames, and I have no axe to grind by advocating a deeper brood-nest, but find that for my purpose in this district it is much the best for honey production.

I can understand our Scotch friends liking the shallower brood-nest for use at the heather. As this is a piece of a heather district, and in uncertain heather seasons such as we have had lately honey naturally goes to the brood-nest first, and, of course, a 16 by 10 frame holds more; but that is just where the advantage comes in when April arrives.

I do not mean to say there are no other means of meeting the question of making a change than by adopting a 16 by 10

frame. Why not try an additional box of shallow-frames (as I understand Mr. Wells does) for brood-nest. I mention this as an alternative plan, though I prefer to have brood in a single brood-box. I do not know if I am alone as regards shallow-frames, not having heard of anyone else using a frame 16 in. by 5 in. I find these to work splendidly in conjunction with the larger-size frame, being just half the depth. In my practice, if at any time I want an additional hive, I just put two shallow-boxes together, and it makes up the ordinary brood-chamber, all entrances being cut in the floorboard.

Referring again to Mr. Ellis's remarks concerning a shallower brood-nest than even "standard" for heather, I could easily arrange that, and not interfere with working for the main honey-flow. In fact, I had the idea of trying some experiments that way.

I do not mind any argument, either for or against the "standard" frame, but as my mind is now made up, I think it is fruitless for anyone to say the B.B.K.A. "standard" is the right size, when they have not tried any other. In conclusion, I may say I have had no experience whatever outside this county. I am afraid I am encroaching on valuable space, but as Mr. Ellis say, you have a "W.P.B."—PHIL JONES, Church Stretton, Salop, March 3.

THE STANDARD FRAME.

VALUE OF INTERCHANGEABILITY.

[6235.] I understood, when the above subject was first re-introduced into your pages, that there was no question about the alteration of size, but only an inquiry with respect to the question of strength. The only fault found with the present standard was that through the thin top-bar and the introduction of the saw-cut, frames were liable to sag. This being so, will it not be well to keep discussion to these lines? There will always be two opinions, or more, as to the best size for frames, and no decision on the part of any association will compel bee-keepers to adopt a given size, but it is surely a great advantage to have a standard frame and no thinking person will lightly depart from it. Even to those who, like myself, keep two or three colonies, the advantages are quite obvious, while to those who are wishful to make money as well as honey, the question will surely not be asked at all. For buying and selling, and all purposes of exchange, we must have a standard, and stick to it like wax.

When I started bee-keeping thirty years ago, my first hive was obtained from the late Mr. C. N. Abbott, and I soon got into hopeless confusion between that and the "Woodbury," which then competed for public favour. I hope sincerely, therefore, that there will be no question of size raised or discussed for many years to come. Let progressive bee-keepers progress, and when they find the good land flowing with honey we shall rejoice, and some of us, who are not yet old fogies, will join them.

What we want to know, and what a body of experts and hive makers can tell us is:—1. In what way the present standard frame can be improved? 2. Will the top-bar be better if made ½in. thick and, say, 1¼in. wide? 3. Is it possible to widen the sides and so reduce the too-free circulation of air? 4. Can any modification of the Hoffman frame be introduced? By the way, I wish someone who has had experience would give us his opinion of this frame. In conclusion, let me say, that whatever alterations or improvements are recommended, there should be no question of interfering with the interchangeability of the frames now in use from Land's End to John o' Groats.—J. V., Bearwood, March 2.

[Our own view with regard to the almost vital necessity for adhering to the interchangeability of the standard frame was expressed on page 41 of our issue for February 1. On the other hand, we think it is a matter upon which free discussion will assuredly do good rather than harm, for many whose experience is limited to a dozen years and less will no doubt be enlightened thereby.—EDS.]

SOME SCOTCH NOTES.

THE STANDARD FRAME.

[6236.] I have sent to Hanover Square a frame used for some years by me, and found very satisfactory. The only difference from the ordinary standard is that the top-bar is ½in. thick, and the frames are broad shouldered. I think this type of frame is better than the usual one, because the top-bar never sags and the foundation fills the frame better, so there is less drone-comb. I also think it is warmer than the metal ends, and is slightly cheaper. I would never advocate any great change in size of frame other than the thickness and width of the different parts.

I agree with Mr. J. M. Ellis (6216, page 77), that it is to be regretted that we cannot keep a Scotch bee-paper going, but somehow bee-keepers think the expense too much. There are a dozen or two around me here, yet none of them ever think of taking a bee-paper. If the prominent bee-men of Scotland would write a little oftener to the B.B.J., it would give it a more Scotch flavour, and perhaps induce more bee-keepers to patronise it. At present the general idea is that the information applies to England alone.

We have had a very open winter here, and bees are alive and well, so far, though stores are getting scarce here and there. I noticed some time ago your contributor "D. M. M., Banff," writing on "How to Keep Wax from Cracking When Cooling." If the mould is rubbed with glycerine, it will not crack, however quickly the wax is cooled. A Roslin bee-keeper, who gave me the "wrinkle," says you may place the wax on ice to cool, and it will not crack. I have never done that; but cooling it in the ordinary way I find it never cracks. Yours—HENRY MARRS, Newtonairds, Dumfries-shire, N.B., February 26.

VENTILATING HIVES AND DAMP QUILTS.

[6237.] I have never been troubled with damp quilts or mouldy combs since discarding non-porous quilts, some nine or ten years since. I prefer, and always use, Hessian canvas on top of frames. As to ventilation, it must be borne in mind that bees make the brood-nest practically air-tight. I have some ventilated roofs and some not ventilated, but in all my hives there is a clear 4in. to 6in. space between quilts and roofs, winter and summer, and with an open air-space all round I find no other ventilation is needed. This at least is my experience. Hives made of "sappy" wood are certain to be damp inside. Sappy deal, or pine, absorbs water like a sponge, especially if made with plinths. The best way is to have "weathered" joints. Again, paint for hives should be free from turpentine.

To-day, March 3, my bees have had their first real cleansing flight for three months. —A. H., Wavendon, Bucks.

REVIEWS OF FOREIGN JOURNALS.

By "Nemo."

Two New Bee Papers.—Pastor A. Sträuli has started a monthly bee paper entitled *Die Europäische Bienenzucht*, which is to be an exponent of American methods of bee-keeping. The ebruary number contains illustrated articles on the "Swarthmore" method of queen-rearing and baby nuclei, as well as translations of articles appearing in American bee journals. The other is entitled *Ptscheloradnaya Zschisn*, a fortnightly paper in the Russian language, and devoted to advanced bee-keeping. The editor is M. A. Dernoff, a scientific and practical bee-keeper, who is also the author of several books and pamphlets on bees and bee-keeping.

Bee-keeping in the Argentine Republic.—In *l'Abeille de l'Aisne*, in an extract from a letter of M. Lucian Icles from Buenos Ayres, we read that there are a good many bee-keepers in the Argentine Republic, some having important apiaries and carrying on bee-keeping on a large scale. M. Adolfo Gomez at San Miguel, half an hour by rail from Buenos Ayres, has an apiary of 180 hives, all, except one "Dadant," being of the "Danzenbaker" type. In the pretty suburb of the capital at Belgrano, another bee-keeper, M. A. Reinhold, has an apiary of 80 hives.

The principal bee-keeping centres are at Mendoza, Fueusman, Cordoba, and Borrientés. The "Danzenbaker" hive is also chiefly used here, and M. L. Iches is installing an apiary for the Argentine Government on this system at the Agronomical Institute at Chacarita.

Winter is not very severe, June 27 corresponding with our December 26. The houses are not heated, and the temperature on this day was 66.2 deg. Fahrenheit. The lowest temperature during the summer has been 39.2 deg. Fahrenheit. There are some places, as, for example, that of M. Gomez, where the supers are not removed in winter because there is a species of eucalyptus which flowers at that time and on which the bees work industriously. The honey produced is considered good when one has acquired a taste for the flavour of eucalyptus. Another species flowers in September.

Rational Food for Bees.—According to experiments made in the chemical laboratory of the Elsass-Lothringischen Bee Association, which the *Leipziger Bienenzeitung* publishes, the most rational bee-food is made in the following way:—Two kilos of sugar are put into a saucepan with two litres of water and two grammes of wine-vinegar, covered with the lid, and allowed to boil gently for two to two and a-half hours. The syrup is then strained through a linen or flannel cloth, and when cold is ready for use.

Adulterated Honey.—A short time ago the police seized a quantity of honey which did not appear genuine. Upon analysis it was found to contain a yellow colouring matter which was derived from an injurious mineral substance added to glucose. This was sold cheaply as a substitute for honey, therefore it is necessary for the public to beware of purchasing cheap so-called honey.

Canadian Honey. — Writing about the beautiful exhibit of Canadian honey at the Universal Exposition in Liege, M. Van Hay, in *Le Rucher Belge*, says that Canada is a country especially favourable for the production of a pure and delicious honey in large quantities. Immense tracts of country are covered with clover, whose scented and nectariferous flowers are favourable to the production of honey in abundance. Canadian honey has been

much appreciated at the different shows, owing to its beautiful colour and fine flavour. The exportation of this honey is unimportant, most of it being consumed at home, but as the yield could easily be doubled by the employment of modern methods, it would be very easy, in this great country, to produce an increased quantity of cheap honey, which would be exported to European markets. The construction of hives and appliances in Canada is not costly, as the wood can be had for next to nothing.

Value of Different Races of Bees.—In the *Bulletin de la Société Romande d'Apiculture* we read that M. Ruffy made a report on the value of the different races of bees in Switzerland to the Société Romande d'Apiculture. He had not received replies to his questions from all, but he found out of the 7,713 hives owned by those who did answer, by far the largest number were occupied by either the common black or crossed bees; there being only 82 hives of pure Carniolans and 56 of pure Italians. As far as regards bee-keepers, 89 preferred the common black bee to all others, while 95 had a preference for crosses. On the other hand, 12 liked Italians and only 7 favoured Carniolans.

Foul brood existed in 13 apiaries, but 37 bee-keepers admitted having had it formerly, so that it shows some advance in getting rid of the disease. Black bees are often behind Italians in the spring, but they quickly make up for lost time, and are ready for the harvest quite as soon. Carniolans are only good for rapidly building up an apiary, but they harvest nothing. Crossed with Italians, however, they make good bees. Italians are only good in the valleys in sheltered places, and should be excluded from mountain apiaries and exposed places. M. Ruffy also said that in purchasing Carniolan or Italian bees great care should be exercised so as not to introduce foul brood into the apiary, for it is these races which come from countries where foul brood is endemic that are the most active agents in the propagation of the disease, and it is owing to their indiscriminate importation that so many apiaries have been ruined.

In the discussion which followed, Pastor Descoullayes stated that he had for the last twenty years advocated crossing. Foreign races were of no use at all in Switzerland, where climatic conditions were so different from the countries they came from. The crossings, which fortunately it has not been possible to prevent, have been the salvation of the species.

M. S. Sibenthal was one of the first to introduce Carniolan bees, and he has been much annoyed with them owing to their persistent swarming and failure to harvest honey.

WEATHER REPORT.

WESTBOURNE, SUSSEX,

February, 1906.

Rainfall, 3·25 in.	Minimum on grass 20° on 14th.
Heaviest fall, ·54 in. on 18th.	Frosty nights, 14.
Rain fell on 21 days.	Mean maximum, 44·4.
Above average, 1·38 in.	Mean minimum, 35·8.
Sunshine, 96·6 hours.	Mean temperature, 40·1.
Brightest days, 20th and 21st, 8·2 hours.	Above average, 1·9.
Sunless days, 7.	Maximum barometer, 30·30 on 7th.
Above average, 12·9 hours.	Minimum barometer, 28·96 on 11th.
Maximum temperature, 50° on 2nd.	
Minimum temperature, 25° on 14th.	

L. B. BIRKETT.

FEBRUARY RAINFALL.

Total, 2.66in.; heaviest fall, .41 in. on 10th. Rain fell on 21 days.—W. HEAD, Brilley, Herefordshire.

Queries and Replies.

[3232.] *Suspected Disease in Wells Hive.*—A short time ago I purchased a "Wells Hive." It was sold as containing a stock of bees in each side of the hive, and each lot being headed by a young queen. The hive duly arrived a few days back, and I noticed that there was little or no sign of life about the entrance to one division. On opening the compartment noticeable as being so quiet, I found it deserted. The reason of this was evidently through the queen excluder being improperly arranged, and this had enabled the queens to meet, and one had been killed. Consequently, the bees had all entered the other compartment. A section-rack with honey in it was on top; brace-combs abound, and the hive had every appearance of not having been opened for a considerable period. As far as can be seen the occupied side of the hive is healthy; but nearly every comb on the other side has some cells with a suspicious appearance. I therefore beg to send a box of small samples cut from combs for favour of your inspection and opinion, which will oblige. E. S. J., Chatham, March 3.

REPLY.—Among the eight small bits of comb sent we find one cell in which are the remains of a dead larvæ, showing rather marked signs of disease. In all the other cells there is nothing worse than pollen.

[3233.] *Renewing Combs in Spring.*—Would you kindly answer these questions in your valuable paper, which I take regularly:—1. The combs in one of my hives are four years old, and I think they may require renewing; about how many frames of foundation may be inserted at the same time, and should they be placed in the middle of the brood-nest, or at the ends? 2. When would be the best time to put the new frames in the hive. 3. The enclosed candy, to which pea-meal has been added for spring stimulation, is a sample of my own making. Is it made right, and will it do for the bees?—E. M. M., St. Asaph, N. Wales, March 1.

REPLY.—1. Begin by inserting one frame of foundation in centre of brood-nest when weather gets warm and settled, and there are not less than four full seams of bees in the hive. A fortnight later, insert another frame, and if the colony is making good headway, and strong in bees, a third frame may be given before supering the hive. 2. The last week of March or first in April is a good time, if weather keeps fine. 3. Candy is altogether too hard for bee-food. What recipe did you follow in making?

Notices to Correspondents & Inquirers.

Letters or queries asking for addresses of manufacturers or correspondents, or where appliances can be purchased, or replies giving such information, can only be inserted as advertisements. The space devoted to letters, queries, and replies is meant for the general good of bee-keepers, and not for advertisements. We wish our correspondents to bear in mind that, as it is necessary for us to go to press in advance of the date of issue, queries cannot always be replied to in the issue immediately following the receipt of their communications.

HEATHER (Herefordshire). — Quality of Heather Honey.—1. Your sample is heather honey of good quality, but is of unusual consistency for a granulated honey. It gives one the idea of its having been stirred in order to retard granulation, and in this way has lost the usual stiffness of ordinary granulated heather honey. 2. The chance of its winning a prize on the show-bench depends, of course, upon what is staged against it in competition, but its chance of success would be very fair. 3. It should be jarred at once, while sufficiently soft, to allow it to settle down into a solid mass. 4. It is, we think, mainly from Calluna vulgaris, but not entirely so.

J. N. (Nunwick).—Golden Italian Bees.—We thank you for sending names of dealers from whom queens were got, and will endeavour to obtain further information for you with regard to the peculiarity named.

E. J. T. (Gowdall, Snaith).—Moving Bees On.—We will be glad to have photo of your bee-wagon, and if useful and suitable for a tone-block will have it engraved for publication in our pages.

H. TURNER (Stourport. — Making the "W.B.C." Hive.—There is no single number of the B.B.J. which contains a full description of above hive and instructions for making. All these particulars, however, are given in the "Bee-keeper's Practical Note-book," price 1s. 1d., post free, from this office.

B. W. E. (Norfolk).—Bee Nomenclature.—The bees sent are well-marked hybrid Carniolans.

F. S. (Pocklington).—Joining B.K. Association.—Mr. F. B. White, hon. secretary of the Surrey B.K.A., will no doubt give full information with regard to the advantages of membership. His address is Marden House, Redhill.

A. M'D. (Glenurquhart).—Candy-making.—Sample is soft candy, but hard on top; it has not been boiled enough, and the bulk is coarse in grain and very watery, while fresh made, but will doubtless be very hard as it dries. Burnt sugar in injurious to bees, and should never be given to them as food. Try Br. Colomban's recipe on your next attempt.

A. DELL (Lancs.).—Your sample of soft bee-candy is very good indeed, and could hardly be improved.

R. B. D. (Great Missenden).—1. Horsham, Sussex, as a Bee District.—Bees do well at Horsham, as the forage there is varied and plentiful. 2. We regret to say there is no active association at work in the county at present.

W. E. C. (Bromley Common). — Damp Quilts and Faulty Roofs.—You will find several references to methods of preventing dampness in this issue, of which you might take advantage.

A BEE-KEEPER (Cambs).—Packing Bees in Skeps for Transit.—Nothing is simpler or cheaper than a rough box—of sufficient capacity to hold the skep when inverted—and allow its upper edge to be level with top of box, when covered. The bees must be securely confined in skep by a covering of very open canvas, or *scrim*, so as to allow plenty of ventilation. A few old newspapers will make the skep stand rigidly upright, and a stout cord tied round the box to carry by, will make all secure.

*** ***Some Queries and Replies, &c., are unavoidably held over till next week.***

Editorial, Notices, &c.

BRITISH BEE-KEEPERS' ASSOCIATION

ANNUAL MEETING AND CONVERSAZIONE.

The annual general meeting of the British Bee-Keepers' Association will be held at 4 o'clock on Thursday next, the 22nd inst., at 105, Jermyn Street, S.W., and it is hoped that all members living within reasonable distance will avail themselves of the opportunity to be present. Members generally of county associations affiliated to the parent body are also cordially invited to attend, along with their official representatives, in time for the conversazione which follows the business meeting, beginning between 5.30 and 6 p.m.

The latter function promises to be specially instructive, as affording an opportunity to those interested in the standard frame question for inspecting such frames as have been sent up for examination and comment. Another item on the agenda for instructive conversation is concerned with "Varieties of Heather Honey," and it is to be hoped that anyone having samples of distinct gatherings from either of the two best known heathers, *i.e.*, *Erica cinerea* (or bell heather) and *Calluna vulgaris* (or ling) will bring or send them up for comparison.

There will also be read during the evening a paper by Mr. F. W. L. Sladen on "The Italian Bee," dealing with the breeding of queens by selection for the improvement of the honey-producing character in Great Britain.

Light refreshments will be provided, and visitors may be assured of spending a pleasant and profitable evening at which members and their friends will be heartily welcomed.

REVIEWS.

Simplified Queen Rearing for the Honey Producer by Swarthmore, published by the Swarthmore Apiaries, Swarthmore, Pa., U.S.A., price 1s. 1d. post free. This is the fourth of a series of papers on apiculture emanating from the author of the Swarthmore method of queen-rearing. It is especially written for extensive honey producers, and describes a simple plan of queen rearing with Swarthmore appliances, which can be successfully carried on, without materially interfering with honey production, or using up bees which should be storing honey, and which will produce good queens with as little time and attention as possible. In the 29 pages, 8vo., full directions are given for raising cheaply any number of queens during a honey flow, and we are told that there is "no disturbance to brood combs, no loss of brood or honey, no stop in egg-laying, and no time lost in hunting queens." The pamphlet is fully illustrated, and neatly printed.

Educational Postcards.—The Country Press, of 19, Ball Street, Kensington, W., are issuing a novel series of educational postcards, the first example of which (Natural History Department), is a picture presentment, on seven cards, for the price of sixpence, of the whole of the British ferns (42 species, nature prints), from the illustrative plates of Mr. Francis George Heath's work, "The Fern Paradise." These, we understand, will be followed by other representations on postcards of natural history subjects, and others likely to have an educational value, and we hope bees may be included in the series. The cards before us are beautiful specimens of art, every detail coming out distinctly, being thrown up into relief by the dark background.

HONEY IMPORTS.

The value of honey imported into the United Kingdom during the month of February, 1906, was £2,692.—From a return furnished to the BRITISH BEE JOURNAL by the Statistical Office, H.M. Customs.

LANCASHIRE B.K.A.

ANNUAL MEETING.

The annual meeting of the above association was held in the rooms of the Preston Scientific Society, Fishergate, Preston, on February 24.

Mr. George Rose, who was elected to the chair, moved the adoption of the report, which showed that the membership of the association remained the same as in the previous year—thirty-six new members having joined during the year, and thirty-six had resigned. The Expert reported that he had examined 1,213 stocks belonging to the members, of which only twenty-six were found to be affected with foul brood. Sixteen of these stocks were destroyed, and the remainder (which were only slightly affected) left to be dealt with by their respective owners. Altogether the Expert's report is very favourable regarding this pest, but the great danger in this county, as in others, lies in the fact of there being a good number of diseased stocks in the apiaries of non-members, which are a standing menace to bee-keepers in the whole county.

The balance-sheet, which showed a small sum in treasurer's hands, and the report were passed.

The following officers were elected, viz.: President, Lord Balcarres; vice-presidents (nineteen in all) were re-elected; auditor, Mr. Alfred Wood, A.C.A.; treasurer and librarian, Mr. F. H. Taylor; hon. secretary, Mr. James N. Bold.

After the business was concluded, the members adjourned for tea, and re-assembled in the evening at 6.30, when the members were shown by Mr. F. H. Taylor his set of beautiful microscopic slides, illustrating various parts of bee anatomy; after which Mr. F. H. Taylor gave a lantern lecture on "Some Wild Bees—British and Foreign," which proved to be very interesting.

Mr. Shackleton, of Burnley, then gave a humorous description of his tour among some German bee-keepers. Altogether a very enjoyable evening was spent.

Votes of thanks were passed to the Scientific Society for the use of rooms, and to their secretary, Mr. Heathcote, who manipulated the lantern and arranged the microscopes for Mr. Taylor's slides. — JAMES N. BOLD, Hon. Sec., Almonds Green, West Derby, Liverpool.

CHESHIRE B.K.A.

ANNUAL MEETING.

The annual general meeting was held at Clemence's Café, Northgate Street, on February 26. The Rev. T. J. Evans (chairman), reported that the season of 1905 had been a good one for bee-keepers as regarded honey, and a fairly satisfactory one financially for the Association. A vote of thanks was unanimously accorded the hon. officers, hon. auditor, and hon. librarian for their services. A feeling of great regret was expressed at the tendered resignations of Rev. E. Charley as hon. sec., and Mr. T. D. Schofield as hon. treasurer, and when, with some persuasion, both the gentlemen named agreed to take office again for another year, on consideration that their resignations were accepted at the end of the season 1906, a hearty vote of thanks was unanimously accorded them. The Duke of Westminster was re-elected president for 1906, as were the vice-presidents, with the exception of Mr. Coningsby Disraeli, owing to his absence from the district. The committee were re-elected, with the exceptions of Mr. Wm. Cartwright, at whose death general regret was expressed, and Mr. H. Bell, who had left the district; Messrs. G. T. Dickson and F. Benyon were elected in their stead. The hon. auditor, Mr. J. Tonge, was accorded thanks for his services, and re-elected. It was agreed to divide the joint library with the Lancashire B.K.A., and to form a C.B.K.A. library, the books to be kept at Grosvenor Chambers, Chester. — Rev. E. CHARLEY, Hon. Sec., Rossett Vicarage.

FORMING NUCLEI FOR VIRGIN QUEENS.

BY F. W. L. SLADEN, F.E.S.

In forming nuclei for the introduction of virgin queens, I have lately employed extensively a method which requires only easily obtained apparatus, is so simple and has met with such great success, that I think it should be of value to all bee-keepers, especially for introducing virgin queens of valuable parentage that may be received through the post. A queen-breeder sells virgin queens at a much lower price than fertile queens, because he can rear an almost unlimited number of virgin queens, but has not a large enough force of bees to get more than a certain small number of them fertilised. Now that virgin queens can be so successfully introduced into the purchaser's apiary, the one difficulty in the way of their popularity is removed.

It is well known that there is some risk of a virgin queen getting killed when she is introduced to an ordinary established colony or nucleus, especially if she is over two or three days old. Doolittle seems to have been the first to notice that this risk is removed if the bees are rendered queenless and broodless a few hours before the queen is introduced, the queen being invariably accepted by such bees.* Doolittle recommended the formation of queenless and broodless nuclei for the introduction of virgin queens, the bees being confined in a well-ventilated box to prevent their dispersing, but little notice seems to have been taken of this method of nucleus formation until four or five years ago, when several prominent American queen-breeders began to employ it extensively. Some experienced American queen-breeders have found it advantageous to use special small combs in the nuclei; but in the cooler, more cloudy and windy climate of England I have found that the advantages of the full-sized brood-comb (which is smaller in England than it is in America) outweigh those of special small combs, and I feel quite sure that the British bee-keeper will get better results with less expense and trouble by employing only the ordinary B.B.K.A. standard frame in nuclei. Nuclei on combs in standard frames not only require less attention than those on special small combs, but two, three, or four of them can be kept in the brood-chamber of an ordinary hive by the simple addition of one, two, or three close-fitting division boards, and they can be easily united together to form one strong profitable colony by removal of the division boards the day after all the queens except one have been removed.

I have found that brood *over seven or eight days old* in the nucleus does not pre-

* "Scientific Queen Rearing," 1889.

vent the friendly acceptance of the queen; at the same time it gives the nucleus a better start, and the queen is more likely to get fertilised if fertilisation is long delayed by unfavourable conditions than when there is no brood. A great advantage possessed by nuclei of this kind, especially when the various stages of their formation are carried out at the times of day given below, is that a much smaller proportion of bees will return to the parent hive than with nuclei formed in other ways.

The above preliminary remarks will help to make clear the method of nucleus formation which I am about to describe.

To make the hive for the nuclei, take an ordinary hive, made to hold ten standard frames, and close up the flight-hole with a block of wood. Make two close-fitting $\frac{3}{8}$in. thick wooden division-boards to serve as bee-tight partitions, by which the brood-chamber may be divided into three com-

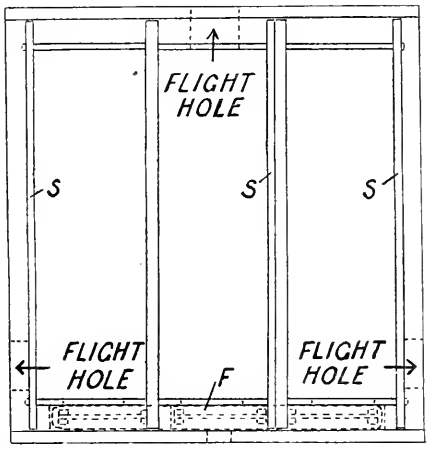


Fig 1. Plan of Sladen's Nucleus Hive.

partments each containing three frames. On the under edge of the brood-chamber cut three flight-holes, each 2in. wide by $\frac{3}{8}$in. deep, where shown in fig. 1. Provide a piece of straining canvas, or of sacking that can be seen through when held up to the light, large enough to cover the top of the brood-chamber.

A strip (fig. 1, *s s s*) measuring $\frac{1}{4}$in. by 17in. is placed in each nucleus to act as a wedge to keep the frames in their place; before a nucleus is examined the strip is lifted out, and so room is obtained for shifting or lifting out, or in, the frames without crushing bees.

The above are the essential features of the nucleus hive, and good results are to be obtained from such a hive, but for those who would like to make this hive in the best manner, the following additional particulars of the way I now make mine may be useful.

In fig. 1, at *F*, is shown a tin feeder in one of the side walls. A vertical section of the wall and feeder is shown in fig. 2, and a view of the feeder and inside wall from the outside in fig. 3. I find this feeder most useful, as with it the three nuclei can be fed at one filling without even lifting off the roof. The feeder is 4in. deep, $13\frac{1}{2}$in.

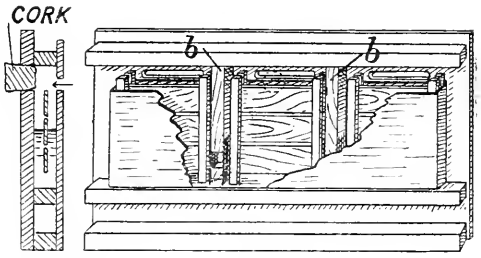


Fig. 2. Fig. 3.

Details of Feeder in Wall of Sladen's Nucleus Hive.

long, and $\frac{7}{8}$in. wide, and holds about 2lb. of syrup.* There are two wooden partitions (*b*, *b*) to divide the feeder into three compartments, one for each nucleus; the bottom part of each partition consists of wire-cloth to allow the syrup—but no bees—to pass from one compartment to the other. The bees pass into the feeder through holes in the inside wall just above the top of the feeder, and there are cleated slats of 1-16in. thick wood standing in each compartment for the bees to crawl on to prevent them from drowning. The syrup is poured through a funnel into a hole in the outer wall opposite the middle compartment, and this hole is closed with a cork to keep robber bees out. In my latest pattern of feeder the syrup is to be poured through a hole in the roof.

The brood-chamber has no plinths, and the floor-boards are nailed either to two stout joists (for a detachable floor) or to the brood-chamber (for a fixed floor).

For the roof, nothing, to my mind, is better than a large flat cover of $\frac{3}{8}$in. boards

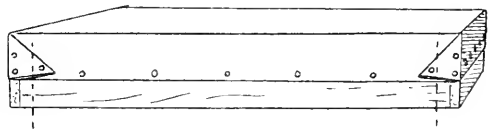


Fig. 4. Roof of Sladen's Nucleus Hive.

strongly nailed to end-pieces $\frac{7}{8}$in. thick, and covered with a sheet of "Neponset," "Paroid," or "Ruberoid" roofing material, the corners of the sheet being folded, not cut, and these and the edges fastened down with galvanised tacks in the manner shown in fig. 4. A roof in my apiary

* I am now making some larger and deeper feeders to hold 4 lbs. of syrup.

covered with "Neponset" shows no sign of deterioration after six years' exposure. If none of these brands of roofing material can be obtained, then sheet zinc may be used, but it is not so easy to fold.

The nuclei are formed at mid-day on the day that the virgin queens are received, or, if they are home-reared, on the first or second day after they are hatched, in the following manner:—

First stuff some freshly-plucked grass tightly into the flight-holes of the nucleus hives to prevent ingress or egress of bees through them, and provide yourself with an ordinary empty section-rack with wooden rests. It will be found that when this rack is placed on the nucleus hive in a certain way the two rests will rest on the two partitions between the compartments.

(*Continued next week.*)

Correspondence.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

**** In order to facilitate reference, Correspondents when speaking of any letter or query previously inserted will oblige by mentioning the number of the letter as well as the page on which it appears.*

NOTES BY THE WAY.

[6238.] With twelve hours' sunshine per day, and the almanacs asserting that winter is past, bee-keepers will now be turning their attention to spring management. Those who packed up their stocks properly at the end of last season with young queens at the head of strong colonies, and an abundance of stores for winter, will not have much trouble in attending to their bees for the present beyond preparing for a good spring cleaning next month; but the laggards will have to give constant care to the apiary if they hope to bring some of their weaklings through the critical period for weak colonies—*i.e.*, the early spring months. They must first see that these small colonies have a constant supply of food, reduce the entrances to $\frac{3}{4}$in. in width, place over the quilt covering the brood-combs a sheet of paper with a hole in centre to correspond with feed-hole in quilt, then set the food over the hole and a good supply of warm wraps; this will help to conserve the warmth of brood-nests, and induce breeding.

Robbing Weak Stocks.—Clearing out the stores of weak stocks is a pastime that stronger colonies often set about at this period of the year in real earnest, and in a few hours will rob them out clean of food. In these cases the best quieter I know of is the watering-pot, with a fine spray. Give all the colonies a good drenching, then sprinkle a few drops of carbolic acid on a little loose hay, and place this at the entrance of the stock being robbed out. The robbers already in the hive can manage to push their way through the hay, but the bees outside will not pass through it in order to get into the hive; then when things have quietened down a bit close the entrance of the hive with a piece of perforated zinc till the bees have done flying, and then open the robbed hive and deal with it according to its worth. If only a small lot of bees are left unite them to another stock, and use the food left for helping colonies needing it. On no account leave it to be cleared out by the bees of other hives, as robbing demoralises the whole apiary, and will often induce the bees to attack other stocks promiscuously, and thus extend the mischief and loss.

After the drying winds of March hive-roofs which were a month ago heavy with moisture will now be in good order for painting, and one good coat (or, better still, two coats) will renovate the apiary and improve its appearance very much if every hive is nicely painted. I generally do my painting in the afternoon after a fine dry morning, when the hurry of the bees' labour for the day is nearly over. Entrances can be closed during the painting of the hive-front. As most of my hives are on the combination principle, I have driven strong wire-nails near the front corners, leaving the heads of either standing out $\frac{1}{2}$in. to $\frac{3}{4}$in.; on these the hive-roof turns up (as on a hinge), and a piece of strong string from roof to hive-body allows the roof to stand nearly on its end on the nail-heads. I like this plan for giving easy access to the brood-combs, and the turned-up cover forms an effective screen to the manipulator; it also allows the roof to be lifted off if required.

Spring Feeding.—Those whose apiaries are isolated may with advantage towards the end of the month give some thin medicated syrup in shallow vessels, with straw cut in 2-in. or 3-in. lengths floating on the top of food to allow the bees to take it without being drowned. Even if there are a few hives around you, a few feeds of medicated food may help to keep your neighbour's bees in condition, and thus prove a service to yourself in the long run. This open-air feeding stimulates colonies, in my opinion, more than inside-feeding; but any weak stock should have a supply given inside the hive in addition to the food they share with the stronger from the supply in the open.—W. Woodley, Beedon, Newbury.

("Correspondence" *continued on page* 106.)

HOMES OF THE HONEY BEE.

THE APIARIES OF OUR READERS.

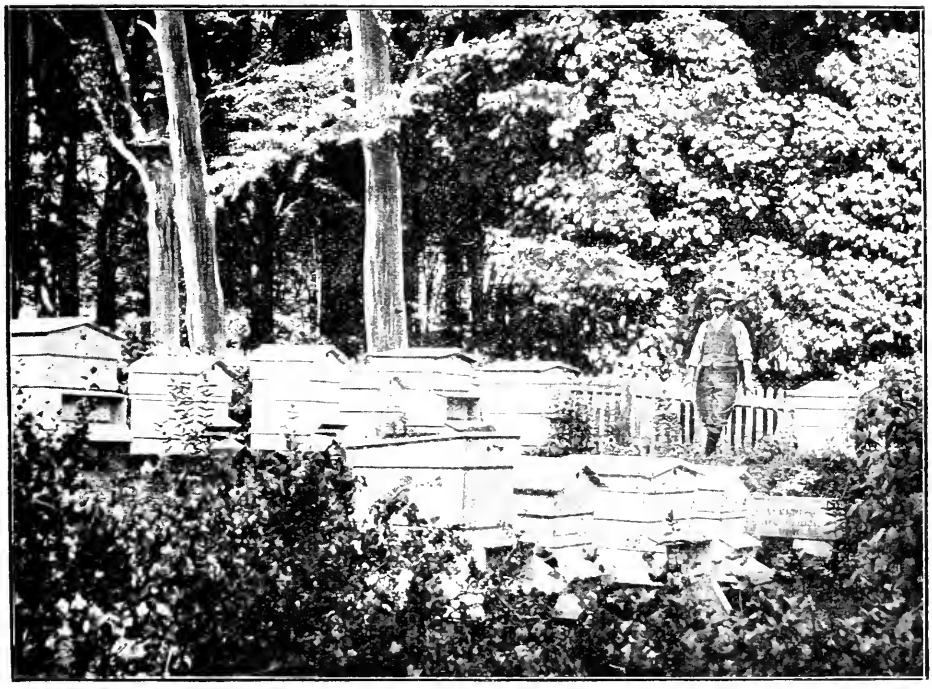
The apiary seen below is nicely located in some respects, but hardly commends itself to the queen-breeder as a safe "mating place." It may also explain the loss of queens in spring, of which Mr. Newbigin complains, if—as some bee-men say—queens take an airing flight at that season. Messrs. Gibson and Co., Gateshead-on-Tyne, have apparently also had trouble in getting a good light for photo. Of himself our friend writes:—

I have kept bees for over twenty years, so that dates back to a time long before I left school. Although my occupation is that of game-keeper, I am a fairly good amateur joiner, and nearly all the hives seen in photo were made by myself. It will be seen that all are painted white. With regard to my bee-keeping, it may be said to take more of making it a hobby than anything else, but I like to go in for having bees of as good a strain as can be had. Seven of the hives shown are headed by "Golden Queens." The only fault I find with these bees is that the queens often leave their hive and get lost, and it is most difficult to find a reason for this fault. In fact, I cannot account for it at all. Two of my queens were lost this year, also two last year in this way.

But these bees are grand honey gatherers, while the queens are also very prolific, produce very hardy workers, and are easy to manage when manipulating them.

I buy all frames and fill each with a full sheet of best foundation, and never keep the combs more than three years. I find this plan necessary because of a slight outbreak of foul brood, but by this means the bees are always in good, healthy condition. I send them to the heather every year, the moors being five miles away, but I cannot boast either this year or last of securing good "takes" of honey. This year everything in summer was dried up for want of rain, the white clover yielding next to nothing, and most of my sections at the heather were full but not sealed. My best hive only furnished 18 1-lb. heather sections.

I believe it to be a good point to have all the sections fitted with drawn-out combs when put on the hives, making a good start when the honey flow comes on. I have done fairly well in queen rearing, and can manage to utilise queens for increasing stocks by forming nuclei. I also do some bee-driving. I know foul brood too when I see it. When at my bee-work I always



MR. J. NEWBIGIN'S APIARY, HUMSHAUGH-ON-TYNE, NORTHUMBERLAND.

operate as seen in picture, with shirt sleeves rolled up, not forgetting the pipe, which latter is often used instead of the smoker.

I have seen some remarks in your pages about winter passages. My plan is an empty section crate turned upside down on top of frames. My bees always winter well on this plan.

Hoping we will all have a good honey season in 1906.

CORRESPONDENCE.

(Continued from page 104*)*

ABOUT BEES AND HONEY.

[6239.] In looking over my marginal notes in back numbers of B.B.J. (which are kept for reference), I see our friend "D. M. M." says he has never heard "tanging." It used to be quite common here a few years ago, bell, fire shovel, and poker being requisitioned to bring the bees down, and I like to hear it yet, it reminds one so much of old times.

Last season I sold some heather sections to an Edinburgh firm, who quoted me 1s. 4d. per lb. for best, and 1s. per lb. for seconds. They surprised me very much by weighing the whole together and then deducting weight of section-wood. The price being so good wholesale, I made no demur at this, but it was an altogether new idea to me. Concerning the sending of honey by rail, I always forward mine at "Agricultural Produce" rates per passenger train, but I find it necessary to tell the station people how it is to be sent, not contenting myself with merely marking it on box, or they will be almost sure to charge full "parcels rate." The sender is also required to sign an "owner's risk" note for the first consignment. This holds good for future lots. Now that railway companies are sending only fully-laden wagons, small consignments might have to be transhipped half-a-dozen times before reaching their journey's end. This plan was not much followed three years ago, but the railway companies see the need for economy now; therefore I say, send by passenger train, which is nearly as cheap, much quicker, and does not have to undergo so stormy a passage if boldly labelled "Great care—Honey in Comb." Above all, do not label it "Glass!" or you will be charged double rate.

Last year I bought a 5 lb. lot of English foundation from a well-known dealer. It seemed very soft, and though well wired in frames it all broke down. Now I use "Weed" light brood, nine sheets to pound, and find it very good. —

I see "D. M. M." mentions in B.B.J. of December 28 that bees in his district had ten weeks' imprisonment; hereabouts bees have been flying every week since last autumn, on some days as busy as on an April day. Corn crops in the far north were only secured in December, while with us here all crops were in early, and we had a splendid autumn and open winter.

Referring to ball-bearing honey extractors mentioned in January 25th issue, I often think what a great improvement these would be, and seeing how easily they could be added, I wonder why manufacturers do not try them. I now use a "Cowan reversible," which would run as long again with ball-bearings, I feel certain. When doing all the work yourself it is a great help if your extractor will run by itself at top speed until you get another frame half uncapped and ready for it. I made some candy the other day—my third lot in ten years—and it was very good. I followed the "Guide Book" instructions carefully, not having any honey on hand for Br. Colomban's excellent method.

We fared very badly through want of rain during fruit-bloom and clover season, and suffered from too much of it at the heather.—J. G. N., Langwathby, Cumberland.

BEES AND POLLEN-GATHERING.

[6240.] Some considerable time ago a letter from Colonel Walker appeared in the B.B.J. referring to a statement we often hear and see—viz., that in cleaning their antennæ bees use the right front leg to clean the left antennæ, and *vice-versâ*. Colonel Walker asked if anyone had noticed if this statement was correct. Up to this time I have not seen any reply to the Colonel's question; but since the letter appeared I have taken particular notice of how bees act, and have frequently observed them clean both their antennæ and tongue, but they have invariably used the *right* leg for the *right* antennæ, and *vice versâ*. They often clean both antennæ simultaneously; but I have never seen them do it as referred to in Colonel Walker's letter; in fact, I fail to see how they could possibly do so.

My bees were flying freely, working on the crocus, on the 6th inst. The pleasant hum in the early spring generally attracts one to the hives. I was watching the bees coming and going at one hive, casually observing a few crawling on the ground here and there, when my attention was suddenly arrested by a fine queen crawling a few inches from the side of the alighting-board of the hive I was watching. I placed her on the alighting-board, but she was promptly "balled." I therefore rescued her and placed her in a cage while I examined that hive and the next with a view to her re-introduction—she was between the two hives. Fortunately, the day was warm and sunny, so I was able to search the combs thoroughly to see

from which hive the queen was missing. To my surprise I found laying queens in each, so perforce had to examine the rest of my stocks, but found a laying queen in every one. I then examined a hive in the next garden, but with the same result, and I am still wondering where that queen came from. She was full-sized, and appeared quite normal.

Bees in this district have come through the winter well, and are breeding rapidly, and so far there is every prospect of a good time coming if the weather is favourable. —J. HERROD, Trentside Apiary, Sutton-on-Trent, March 11.

THE SEASON'S OUTLOOK.

EARLY WORK AMONG THE BEES.

[6241.] If typical wintry weather of the old-fashioned sort is to be taken as a forerunner of good things in store for bees and bee-men, the outlook for the coming season is propitious. During February we had a very severe snowstorm, with the result that our roads were blocked for the greater part of the month to an extent unknown during the past ten years.

As outside work was impossible, I had a busy time with saw, plane, and hammer, keeping up bodily temperature while accumulating a goodly pile of bee-furniture in readiness for the season's campaign.

Last Sunday (4th) being mild and spring-like, the bees had a grand airing flight.

All alive, and in good condition, judging by the increasing warmth beneath the quilts.

No, I did not look into the brood-nest, or even move a frame. The month of May is quite time enough for manipulating in these parts. The skeppists here report several stocks dead, mostly July swarms, which did nothing for themselves or their owners. Having seen to stores being ample before closing down in September, the chief concern should be to conserve the warmth of the expanding brood-nest.

On this subject the recommendations are many, ranging from old newspaper to "old clo." Both the above are useful, and the latter I was wont to annex to the detriment of the domestic rag-bag. But now, whether from awakened views of propriety, or an increased sense of the fitness of things, the thought of hiding the "mysteries of the hive" 'neath discarded bifurcated or other raiment does seem to jar upon my sensibilities.

After all, for efficiency and inexpensiveness there is nothing to beat chaff packing. A large-sized sack half filled with chaff and tightly tied or sewn close to the mouth will be found an excellent heat retainer, when snugly tucked down over the usual quilting.—J. M. ELLIS, Ussie Valley, March 10, 1906.

SUGGESTED CONFERENCE

OF COUNTY B.K.A. SECRETARIES.

[6242.] For some time past it has occurred to my mind that it would be advantageous in a high degree to the industry at large, as well as to county associations in particular, if their secretaries were to meet in conference to discuss the best means of securing the highest success of the county societies. Certainly no harm could arise therefrom, and it is almost certain that great good might follow. The recital of mutual experiences, methods of procedure with regard to experts, county councils and flower shows, and the inducements offered to enlarge the list of subscribers to the various associations, are merely a few subjects which immediately force themselves involuntarily upon one's mind as being worthy of examination. Therefore, if county secretaries deem this suggestion a feasible one, I beg permission to suggest:—

1. That the secretaries meet at a central town—Birmingham, London, or Sheffield —for one day.

2. That the meeting take place on Easter Tuesday—a holiday to most people, and the threshold of the season.

I shall be pleased to receive, within the month, postal replies to the above from all who are interested in this matter, and also for further suggestions.

It seems to me that such a meeting would infect one and all with zeal and enthusiasm, upon which associations largely flourish.

Should the project be taken up enthusiastically, as I hope it will, no doubt the Editors will again grant me a little space to announce the arranged plan, as they very kindly permit me now to give publicity to this idea.—WILLIAM RICHARDS, Hon. Sec. Glamorgan B.K.A., Red House, Gabalfa, Cardiff, March 5, 1906.

[The above suggestion is, to our mind, a very valuable one, and we hope it may be taken up heartily by county associations wherever such are established. Regular conferences held in different centres would doubtless have the effect of combining and strengthening the whole body of bee-keepers and should result in a large addition to membership. Nothing tends more in this direction than co-operation, if carried out properly. We wish every success to the movement.—EDS.]

THE STANDARD-FRAME QUESTION.

VALUE OF INTERCHANGEABILITY.

[6243.] I am much interested in the discussion now going on in your pages respecting the standard frame. Personally, I prefer the present standard, but with the top-bar 1 1-16in. wide, which not only prevents

sagging, but brace-combs are reduced to a minimum, and I also find that combs are built straighter and more uniform in thickness.

It would, in my opinion, be a great mistake to alter the outside size of our present standard, as the value of interchangeability cannot be too much insisted upon, particularly among those who, like myself, keep bees for profit as well as pleasure.

If a larger brood-nest is wanted— and I think a good queen in favourable seasons is often cramped for room when confined to ten frames—I advise my own plan of putting a box of shallow-frames underneath the standard-frames in brood-chamber. I have tried this plan, and find it answers well; in fact, it serves a two-fold purpose, as it also prevents swarming if sufficient room is given above as well.

I cut all entrances in the floor-board, and use plinths on all four sides, so there are no spaces to stop whether the 9-in. body or the 6-in. comes next the floor.

I confess I have no practical experience of the large 16 by 10 frame, but think the above plan answers the purpose, besides having the advantage to those of your readers who work for the heather of being able to take away the lower box, which by then will be nearly empty of brood, while the upper lot, being mostly full of sealed stores and brood, forces the bees to carry nearly all the heather crop above.

Just a word on the reluctance of many bee-keepers to take a bee paper regularly; the argument of expense will not hold good, as the information to be obtained from its pages more than pays the penny or so a week.

Personally, I take the B.B.J., Record, and also the American B.J., and find it pays to keep thoroughly abreast of the times.

I enclose name, etc., and sign as before—Cotswold, Oxon, March 12.

BABY NUCLEI.

[6244.] I am exceedingly glad to see others are either trying, or about to try, this method of dealing with queens and increase, as it is quite certain the more it is understood and practised the greater will be its popularity. My own nuclei has not come through the winter this time as well as previously, but it was possibly my own fault in not giving proper attention during the autumn feeding. However, some are all right, and I trust will be ready for service early this year. I observe that your correspondent "Mac" (6219, page 78) says he is afraid of the result with only about 300 bees. Let me assure him he need have no fear, if his experiments are carried out from May 21 to September 30, and he sees that the little colony has plenty of food all the time. I have a friend living further north than "Mac," who was very successful with the plan last year.

Size of Frames.—Both the "Standard" and the 'Simmins' Commercial" frame are in use in my apiary, and although there is much to be said in favour of either, I usually get best results from the larger ones. I use ten of these for extra prolific and Carniolan queens, and am rarely troubled with swarming. For handling, however, the "Standard" frame is much the better of the two. Of course, the whole question resolves itself into one of ultimate results, and although I have never kept a proper account of this, it is fairly correct to say that in my own case the hives with larger frames have given more honey at end of season. The thickness and width of top-bars is, in my opinion, the greatest and most important consideration; 1 and $1\frac{1}{8}$-in. wide and $\frac{5}{8}$-in. thick top-bars make a good frame, and with $\frac{1}{2}$-inch side and $\frac{1}{4}$-inch bottom-bars. I do not think there is a frame to beat it anywhere.

Coverings.—Much has been said as to the best covering for winter, and after trying nearly all that have been recommended, I find nothing beats one layer of calico or American leather, and plenty of clean newspapers on top of this; the latter are always handy, clean, warm, and impervious to wax moth, and when wet they can soon be changed for new, and the old ones burnt!

On examining my bees the other day, I found all very "fit," though some are running short of stores, and will soon require the syrup feeder.—Amateur, Bristol.

[Our correspondent, when next he favours us with an article for print, will oblige by sending on name, etc., not necessarily for publication, but for reference, according to rule—Eds.]

A CHEAP HOME-MADE FEEDER.

[6245.] Many of those who keep bees as a hobby are able and willing to support it with a liberal purse, and never count the cost of appliances so long as their apiaries are smart and up to date. But there are others who look with longing eyes through the beautifully illustrated catalogues of appliance dealers, no doubt, but can afford to order only such things as are really necessary. To these latter the following remarks are addressed.

To begin with, then, I may say, excellent stimulative feeders can be bought; but the usual home-made feeder consists

of a wide-mouthed glass jar or bottle, with muslin or coarse calico tied over the mouth and inverted over the feed-hole in quilt. This device is simple and successful, provided, first, that the feeder is set level on the frame-tops; second, that the cover of jar is not so porous as to allow the syrup to drip on to the combs, and run all over them on to floor-board, and out at hive entrance. On the other hand, the covering of jar must not be so thick that the hungry bees cannot suck the food through. As I have already said, the above home-made bottle feeder answers if properly managed, but very few bee-men enjoy refilling it when needed. I, for one, dislike it very much. My own plan of making a feeder is this:—Obtain a 2lb. lever-top tin (those in which "Lyles'" golden syrup is sold are just the thing); pierce with a sharp nail three tiny holes in the bottom, from the outside, three-quarters of an inch apart. Next cut a circular hole (2½ inches in diameter), in a piece of ⅝-inch board 4½-inches square; this makes a platform on which feeder rests. When preparing for use, place the feeder on platform, and drive three tacks into wood close to the ledge running round bottom of the tin, so that the nails will hold the tin down in position, and all will be complete.

The square wood platform forms the base of the feeder, and the 2½-inch hole provides a chamber for the bees to cluster in while feeding, and all will have access to the food in turn. Once in position, the feeder need not be disturbed till feeding has been completed for the year, beyond removing the lid by levering it off with a coin when the tin needs refilling. After pouring in a fresh supply of syrup, the lid must be pressed firmly on again so that the liquid will not escape too freely, and run down into the hive.

This form of feeder costs nothing, is easy to make, is always tidy, no bees can escape while it is being refilled, and I have no doubt, if tried, it will give equal satisfaction in other apiaries, as it has already done in mine.

I enclose card for reference, and sign—BUMBLE, Boroughbridge.

LARGE TAKES OF HONEY.

[6246.] In the B.B.J. of February 15 (page 63), your correspondent "R. N. R., Tayport," gives the large amount of 114 lb. of honey as being taken from a single hive; but he omits to state the size of frame he uses, or the number of frames his hives hold in body-box. As I am about to order several hives, I would be much obliged if "R. N. R." will oblige with the particulars mentioned, as I should consider this a productive size of hive for me to use? Name, etc., sent for reference—G. C., Sheffield, March 5.

[We called the attention of our correspondent to the above request, and in reply he kindly writes as follows:—EDS.] "In reply to your Sheffield correspondent the hive in question was a 'W.B.C.,' the body-box of which held ten 'standard' frames of the broad-shouldered type. I find these self-spacing frames all to be desired, and ten of them make a brood-chamber of very satisfactory size. Hoping these few particulars will be all required by 'G. C.'—R. N. R., Tayport."

DAMP QUILTS.

[6247.] I have seen in your columns lately a number of queries regarding the prevention of damp quilts and suggestions for avoiding them, but no reference has been made to the necessity for making the quilts of a non-hygroscopic material. It is, of course, self-evident that a material of this kind should be used, but I think it probable that many beginners do not realise how various materials differ in this respect. Last winter my main quilts were made of chaff, in a case of material that was probably largely composed of cotton or other vegetable fibre. They were never dry, and I attributed it to leaky roofs, and covered some of my bees with zinc. As the quilts still remained damp, I replaced the "cottony" material with flannel at the beginning of this winter, and this has made all the difference. I still use chaff to stuff the cases with, and am convinced that the flannel case has caused the improvement. One of my hives has a roof that is not absolutely water-tight, and after heavy rain I always find that a few drops have got through. These few drops will stand in a pool as big as a shilling on the flannel until I shake them off. They never seem to soak in. For the sake of experiment I have kept in use in a hive with zinc-covered roof one of the old cottony quilts, and it remains slightly damp on the upper surface the whole time. The flannel I use in the new quilts is of a very open texture, and quite cheap.—E. L., Perthshire, March 12.

Queries and Replies.

[3234.] *Death of Driven Bees in March.*—I purchased four lots of driven bees in September last, and joined up by uniting two lots together for hiving in two frame-hives. Each stock was fed up with loaf-sugar syrup, and after placing a cake of candy under quilts of each hive, I packed

them warmly for winter. One fine day in the early part of this month, when other bees were flying well. I found my two hives perfectly quiet—no bees seen. So I made an examination and found the whole colony in hive now dead, and having the appearance of their being so for some weeks previously. The centre combs were much discoloured from excremental matters being discharged all over them, so I concluded that the bees must have died from dysentery. On examining hive No. 2 I found combs in a similar state, and the bees in a very weak condition; but, like No. 1 hive, there was plenty of stores in the combs. The same day robber bees from neighbouring hives came and killed the few remaining bees, and so extinguished hive No. 2, though I was able to save the stores from being carried off. Am I right in supposing that both stocks were suffering from dysentery? I intend to buy several stocks this spring, and so ask:—Would it be detrimental to them if I give frames of stores taken from the above mentioned hives, or is there any other means of using up the same? I shall look for an answer in your valuable journal. I send name and sign—BEGINNER, Tamworth-in-Arden, March 12.

REPLY.—It seems clear that the syrup-food on which the bees were fed up was not wholesome, whether from not being properly made or otherwise we are, of course, unable to say. The fact of combs being found in the condition stated clearly points to dysentery, and this could not be wondered at if the food was thin and watery and left unsealed during the winter. Bees can hardly live under such conditions, if they existed, and it is for you to say whether this was so or not. In other words, driven bees to be safely built up into good stocks in September should be hived on built-out combs and fed with good, thick, warm syrup, given in such quantity as will enable them to get the syrup stored and sealed over by the end of the month.

[3235.] *Buying Carniolan Bees.* — I am about to purchase a stock of Carniolan bees, but I have recently been told that they will swarm eight or nine times in one season. Now, would you tell me, through the B.B.J., if you have ever known them to swarm so often, and if I were to give them room to the extent shown in Fig. 34 of "Guide Book," and perhaps make an artificial swarm, would their disposition to swarm naturally not be checked altogether?—A. H., Falkirk, March 10.

REPLY.—Carniolan bees have a tendency to excessive swarming, but nothing like to such an extent as stated. Giving plenty of room in advance is one of the best checks to swarming that can be adopted.

Notices to Correspondents & Inquirers

Letters or queries asking for addresses of manufacturers or correspondents, or where appliances can be purchased, or replies giving such information, can only be inserted as advertisements. The space devoted to letters, queries, and replies is meant for the general good of bee-keepers, and not for advertisements. We wish our correspondents to bear in mind that, as it is necessary for us to go to press in advance of the date of issue, queries cannot always be replied to in the issue immediately following the receipt of their communications.

G. H. (Basingstoke).—Suspected Disease in Hives.—We cannot pretend or undertake to give "legal opinions" on matters in dispute between buyers and sellers. Those who require such should consult a solicitor. But, with reference to the case as put before us, we may define our reply given (on page 99) by saying that the word "disease" was intended to mean foul brood, *i.e.*, *Bacillus Alvei*. There appears to be no question of the *bona fides* of either party in the case put before us, and some means may surely be found of arriving at an amicable settlement without resorting to that worst of all remedies—"law."

BORROWASH (Derby).—Queen Bee Found Dead.—There is nothing in the appearance of dead queen to account for death. It seems a clear case of death from cold and hunger.

Suspected Comb.

W. H. P. (Shirehampton).—Judging by combs sent the bees have not been affected by dysentery. Our view is that the stock has been robbed by other bees in autumn of last year, and, in consequence of the worry and loss caused in defending their stores the bees have been so demoralised and weak in numbers as to neglect the brood in combs at the time. This would account for the chilled brood found in the combs. There is, however, no appearance of disease about the dead brood. If the queen can be utilised, by all means give her to any stock needing requeening.

G. A. (Hants).—No disease in comb sent. Brood seems quite healthy.

*** *Some Letters, Queries and Replies, &c., are unavoidably held over till next week.*

Special Prepaid Advertisements.

Twelve words and under, Sixpence; for every additional Three words or under, One Penny.

Advertisements for current issue must be received by first post on Tuesday.

A STRONG STOCK WANTED.—Three modern Hives (new) for Sale, 7s. 6d. each; 20s. the three.—Address BIRKINSHAW, Derby. N 69

AYLESBURY DUCK EGGS for sitting, very fine birds, 3s. per dozen. — SMITH, Cuba House, Parliament Road, Ipswich, Suffolk. N 73

BEES—Hybrid Cyprians, good tempered, excellent workers, strong stocks, £1; Nuclei, 14s. 6d.—WOOSNAM, Haytor, Newton Abbot. N 64

BEEHIVES FOR SALE, also quantity of appliances cheap.—Apply MORRIS, 184, Sydenham Road, Croydon N 65

CHAPMAN HONEY PLANT SEEDS, post free, 7d. packet.—E. H. TAYLOR, Welwyn.

Editorial, Notices, &c.

NORTH NORFOLK B.K.A.

ANNUAL MEETING.

The annual meeting of the North Norfolk Bee-keepers' Association was held on Thursday in the Concert Hall, Holt. The Rev. E. Russell was voted to the chair. Lady Hastings was re-elected president, and Lord Justice Cozens-Hardy, Sir W. B. Gurdon, M.P., and Mr. F. T. S. Rippingall, vice-presidents. The committee (re-elected) will consist of Rev. W. H. Marcon, Rev. E. Russell, Messrs. W. Towler, H. Woolsey, E. Mann, J. Platten, C. Clarke, J. Carr, H. Bond, R. Owen Goddard, Rev. A. Downe Shaw, and Rev. T. E. Platten. Messrs. C. P. Cooke, J. Platten, and E. Mann were appointed experts. In proposing the re-election of Mr. C. J. Cooke as hon. secretary, the chairman said the success of the association was entirely due to the good work of Mr. Cooke.

Mr. Cooke then read the report, which stated that the beautiful weather of the 1904 summer undoubtedly brought fresh recruits into the ranks of bee-keepers, and the successful season of 1905 would be a great encouragement to them. The increase in membership was very gratifying. The balance-sheet showed receipts amounting to £23 0s. 6d. On the expenditure side the items were printing £4 10s. 7d., prizes at show £6 18s., expert's expenses £5 0s. 9d.

An interesting lecture was given by Mr. W. Norman, of Harpley, on his experiences as a bee-keeper. He also gave some statistics of the quantity of honey obtained by him during several seasons. In 1900, from twenty-three hives, he got 47 stone of honey; 1901, twenty-five hives and 96 stone; 1902, twenty-five hives and 44 stone; 1903, twenty-six hives and 88 stone; 1904, twenty-six hives and 106 stone. He made on an average about £40 a season from his bees. The meeting closed with the usual votes of thanks.—C. J. Cooke, hon. secretary.

REVIEWS OF FOREIGN JOURNALS.

By "Nemo."

Poison in Bees' Eggs.—In the *Journal of the Royal Microscopical Society* we find mention of the investigations of M. C. Phisalin, which have appeared in *Comptes Rendus* (1905), pp. 275-8. M. Phisalin shows that in bees the ova contain small quantities of poison. It required 475 eggs to furnish enough to poison a sparrow. Phisalin tackles the difficulty that the unfertilised poison-containing egg gives rise to a drone without poison. To allow of the development of a poisonous female the poison "determinants" in the ovum require to be supplemented by something furnished by the spermatozoon or by the accessory male glands.

A New Bee Disease.—According to the *Münchener Bienenzeitung* a new disease, somewhat resembling what is commonly known as *black brood*, has been spreading in Schleswig-Holstein. It has been investigated by the Biological Institution of Dahlem, where combs of brood, dead from this disease, have been microscopically examined. The cause is ascribed to a microbe named *Aspergillus fumigatus fresenius*, which has been found in abundance in the dead larvæ. In this disease the brood dies, and the larvæ, or pupæ, dry up, retaining their original shape, and resembling diminutive mummies in the cells. There is no bad odour, and the dried larvæ remain white, with here and there a slight blackish tinge. They are hard, but crumble if pressed between the fingers. At a later stage the whole of the comb, including brood, appears covered with a greenish mould.

The Biological Institute recommends all colonies affected should be brimstoned and burned, taking every precaution possible, owing to the disease being extremely contagious. The greatest cleanliness must be observed in the apiary, and all dead bees must be carefully removed, so that the microbe of the disease may be prevented from developing. The hive, if to be used again, must be thoroughly disinfected. As this microbe also affects mankind, causing inflammation of the mucous membrane, the greatest care should be exercised in manipulating hives suffering from this disease.

The Willow as a Bee Plant. — In the *Bulletin de la Société Romande d'Apiculture* E. van Hay has an interesting article on his observations of the willow as a source of nectar. According to the author it was at one time thought that bees visited the willow in spring for the pollen they got from the catkins, but he finds that nectar is, under certain conditions, yielded in abundance. He says it is interesting in the spring to follow the movements of the bees when the willows are in flower and all other trees are leafless. At such a time thousands of bees will be seen visiting the catkins and returning laden to their hives. Indeed, from the activity of the bees, one could well imagine that it was the height of the busy season. He also heard the contented hum, so well known to bee-keepers, when the bees are gathering nectar in abundance. The investigations of M. Vesmael and M. Du Mortiers have shown that both the male and female flowers of the willow are furnished with nectaries. M. van Hay also refers to the

fact that Doolittle and Quinby found on crushing bees working on a species of willow (*Salixfragilis*) found no nectar; but he adds: "We must not conclude from this that willows generally yield very little nectar." The secretion from the nectary depends on the composition of the soil, the temperature and hygrometric condition of the atmosphere, as well as electrical influences. M. van Hay has on several occasions taken bees returning to their hives after visiting willows, crushed them, and, testing the juices, has found saccharine matter, so that he has satisfied himself that bees do gather nectar in abundance from such a source. He intends to pursue his investigations this spring in order to find out the amount of nectar carried away by a single bee.

Wax Secretion.—Dr. O. Krancher has an interesting and instructive article on wax secretion in *Deutsche Illustrierte Bienenzeitung*, in which he explains the way it is produced. The wax scales, as every bee-keeper knows, are produced on the four ventral plates of the bee. On these plates there are two transparent surfaces, irregular, pantagonal in shape, and these are covered by the segment immediately above them. The lower part of the ring, which overlaps the plates, is of hard chitine, and the smooth surfaces are slightly sunk. It is on these sunk moulds that the wax scales are formed. If a longitudinal section is made through one of these plates a microscopical examination will show the secreting glands at the back of the transparent membrane. These consist of six-sided cells containing granules and a clearly apparent nucleus. It is of special interest to observe that it is during the summer when comb-building is at its height that these glands attain their greatest development. The more active the bees are in comb-building, the larger are the secreting glands, and the more fully developed are the canals through which the secretion flows. When the bees cease comb-building, which generally happens when they are three or four weeks old, or are flying and gathering, the secreting glands gradually shrink, and are no longer of any use. It is, therefore, evident that young bees, when their glands have their fullest development, are necessary for comb-production. The microscope also shows that the outer skin of the transparent surface has minute pores through which the secretion in the canals of the glands passes. The wax is produced in minute particles through these pores, the pressure of the upper plate causing the particles to unite, and on exposure to the air the wax solidifies in the moulds, is then removed by the bee, and the process is repeated.

Workmen Find Honey in Hawaiian Capital.—Workmen making repairs in the former palace in Honolulu, now the territorial *capital*, occupied by Governor Carter, discovered a great store of honey under the planks, just outside of the Governor's windows. The honey was discovered owing to a leak through which some of it oozed. On removing the boards a space five feet square was found to be packed for twenty-two inches deep with rich comb. The sweet find was divided among the officers of the territory.

Composition of Nectar.—A controversy has been for some time going on in *l'Apiculteur* regarding the elimination of superfluous water in the nectar as gathered from flowers by bees, some maintaining that having hives on scales give false results. M. B. Spoerer reviews the controversy, and states that nectar, as collected by the bees, contains an excess of water, which they have to get rid of. He points out that in twelve kilos of nectar there are three kilos of solid substances and nine kilos of water. When this has been converted into honey and evaporated to three kilos of solids, there only remains one kilo of water as a constituent.

Bees and Colours.—In the same journal we learn that M. Gaston Bonnier read a paper at the Academy of Sciences in Paris on the life of bees. With respect to the visual powers of this insect, scientists are not agreed. M. Bonnier, having made a close study of them, has noticed that bees were not attracted by the bright and showy colours of flowers. They are evidently guided by the scent which draws them towards those that contain nectar. However, every bee has her own work, and M. Bonnier, during his researches, observed that bees occupied in collecting water, took no notice whatever of a comb of honey placed close by the drinking place. He also noticed that other bees seeking a certain species of flower, did not touch the many nectariferous and gaudy-coloured flowers of different varieties from those they were seeking growing in the same place. M. Bonnier says this shows that bees act wisely.

FORMING NUCLEI FOR VIRGIN QUEENS.

BY F. W. L. SLADEN, F.E.S.

(*Continued from page* 104.)

Each nucleus is to consist of three combs containing plenty of honey, and enough bees to fairly cover the three combs. If possible, one or two of the combs should contain brood, none of which must be less than eight days old—in other words, there must be no eggs or small larvæ. Bees from brood-combs make better nuclei than bees

from honey-combs, because a larger proportion of the former are young and unfledged. Care must be taken that no queens (virgin or fertile) or queen-cells are included in the nuclei.

There are several ways in which these combs and bees may be obtained. The simplest way is to take combs with the bees adhering to them from ordinary colonies; but, unfortunately, in many colonies few or none of the combs may be immediately available for this purpose on account of their containing brood under eight days old. A more satisfactory way where many nuclei are required, and one which I practise largely myself, is to remove or cage the queen of a colony eight to ten days before the nuclei are formed. By this method the whole colony can be broken up into a number of excellent nuclei; care must be taken to cut out every queen-cell on the combs, and the colony must not be left queenless more than ten days, for if it is, some of the young queens will probably have hatched, and it is very difficult to find them all. A useful modification of this method is to insert a queen-excluding partition into the middle of the hive instead of removing the queen; after eight days the combs and bees on the side of the partition that does not contain the queen are divided into nuclei. Still another method, the advantage of which is that it can be carried out on any day, is to shake the bees from the brood-combs of a colony—having first set aside the comb containing the queen—into the compartment of the nucleus hive and immediately to fill it up with combs of honey that have been previously obtained from other hives. For the work of shaking the bees, the funnel described and figured on page 18 of my book, "Queen-rearing in England," will be found very useful.

The first nucleus is put into the middle compartment of the nucleus hive. Before many bees can escape the canvas quilt is laid over the frames, and the empty section-rack placed upon it to keep it down and so to prevent any more bees from escaping. The rack is so placed that it does not cover one of the side compartments, and a stone is placed on the part of it that covers the already-formed nucleus. The second nucleus is put into the uncovered side compartment, and the section-rack is shifted so as to cover both it and the middle nucleus only, and leave the other side compartment uncovered for the reception of the third nucleus.

Care must now be taken to see that the bees are sufficiently well confined that they will not be able to work their way out or from one compartment to another during the next few hours. The canvas quilt and grass stuffed into the flight-holes will give the bees sufficient ventilation, provided they are not overcrowded. The nucleus hive is now carried to the spot which it is to occupy; this spot must not be less than 30ft.—more if possible—from the hive or hives from which the bees were obtained, and also sheltered from wind. The nucleus hive is supported on three bricks which are placed under the flight-holes, and project a little so that bees may alight upon them. The roof should be laid obliquely on the section-rack so as to shade the canvas from the sun, and to allow the passage of air over it. About 6 p.m.—*i.e.*, about five hours after the nuclei were formed—a virgin queen is allowed to run into each nucleus through a hole made in the canvas with the point of an ordinary lead pencil. Directly the pencil is withdrawn, the queen is placed with her head at the hole, and she runs in before a single worker is able to escape. The hole is then immediately closed by drawing a few threads of the canvas across it with the point of the pencil. An entry is made of the strain and date of introduction of each queen on a card tacked on the inside of the roof. At dusk the grass is removed from the flight-holes, the rack removed, and a calico quilt placed over the canvas quilt with the roof on top to keep it flat. I cut each quilt into two pieces so that the middle nucleus can be examined without disturbing a side nucleus. If the weather is warm and sunny, and honey is to be got, eggs will be found in each nucleus ten to fourteen days later, indicating that the queen has been fertilised. When these conditions are absent fertilisation does not take place. A queen can, however, be fertilised after two or three weeks' waiting, but the risk of her getting lost or killed is much increased by such waiting. Beginners sometimes fail to get queens fertilised by attempting it when the conditions are unfavourable. Any time during June and July is good for forming nuclei for the fertilisation of queens in any part of the United Kingdom; but May and August are not so good, and April and September still less so, although queens may be fertilised in the beginning of September, this having frequently happened in my apiary.

Bee-keepers who have several empty hives to spare may, of course, put only one nucleus into each hive, stuffing grass into the flight-hole, forming the nucleus, and covering it with canvas and a section-rack, as in the case of a hive made to take several nuclei. Where combs and bees are taken from separate hives to form the nucleus, the beginner will find the larger space in a whole brood-chamber useful for shaking the bees into the hive.

It was stated above that the nuclei should be set up at least 30ft. from the parent hive. Where a horse and spring-cart can be easily obtained it is advantageous to move

them several miles away, for then (1) not a single bee can return to the parent hives, consequently fewer bees may be put into each nucleus, and (2) the nuclei will obtain their food from a new district. This plan is specially valuable where select fertilisations are wanted—for instance, in breeding for the improvement of any character, because hives containing drones of selected parentage can be removed with the nuclei to a district where very few other colonies, and these English bees, exist. It is important that the nucleus hives for transport should be light and strong. I make mine of ⅜in. basswood. The floor is fixed to the brood-chamber, and does not project beyond it; there are spikes projecting from the under edge of each partition, and they

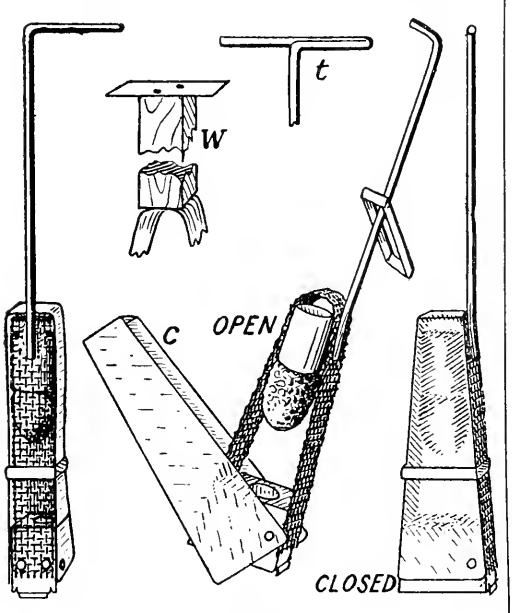


Fig. 5.
Sladen's Improved Nursery Cage for Queen-cells and Virgin Queens.

press into the floor, and so keep the partition from moving. A special framework cover is substituted for the section-rack, and is fastened over the top of the brood-chamber by means of screws.

My improved nursery-cage for the hatching of virgin queens and for holding them until they are distributed to the nuclei is illustrated in fig. 5. The ripe queen-cell is held in position by the wire-cloth sides, which can be easily adjusted to grip securely queen-cells of any size. The cage opens on a new principle, which makes the insertion or removal of the queen-cell or of food for the queen expeditious and easy. The cage hangs between the combs some distance from the top by the stout wire shaft, the bent portion of which rests on the top bar of one of the frames. The pupa, or queen, is thus kept warm between brood, and this is very important in the cold nights of May and June. The cage itself is of the smallest possible size, so that a number of them can hang side by side between two combs without widely separating the combs, and one or more of the cages can be inserted or removed on turning back the quilt without lifting out a frame. The part *c* may be made of tin-plate or of celluloid. With the latter material the queen and queen-cell can be easily seen inside the cage while it is closed. At *t* and *w* are shown different kinds of shafts.

This cage can be used, if required, as an introducing cage. The candy-hole is covered with a tin slide which, when pushed to one side, enables the bees to liberate the queen by eating through the candy.

The nucleus hive and feeder and the queen-cage here illustrated were exhibited and awarded a first prize at the Royal Show in June, 1905. No attempt has been made to patent them, and it is hoped that the descriptions and drawings here given will enable any bee-keeper to make them who wishes to do so.

Correspondence.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

*Communications relating to the literary department, reports of Associations, Shows, Meetings, Echoes, Queries, Books for Review, &c., must be addressed only to "*THE EDITORS of the 'British Bee Journal,' 8, *Henrietta-street, Covent Garden, London, W.C." All business communications relating to advertisements, &c., must be addressed to "*THE MANAGER, 'British Bee Journal' *Office. 8, Henrietta-street, Covent Garden, London, W.C."*

**** In order to facilitate reference, Correspondents when speaking of any letter or query previously inserted will oblige by mentioning the number of the letter as well as the page on which it appears.*

AMONG THE BEES.

THE NEOPHYTE.

[6248.] We should treat him gently and tenderly, and not be too severe even on his faults and foibles, for did we not all of us pass through the novitiate stage at one time? I look back on nearly a score of years and see, with my mind's eye, one unquiet neophyte eagerly yearning for the solution of innumerable enigmas, many of which are still behind the veil. In some senses the initiatory stage of our introduction to the cult is the most interesting. Everything is novel and strange; our knowledge of bees and their ways, at first limited in the extreme, has gradually been

widening and extending, and slowly progressing onward towards the stage when a little of it ceases to be a "dangerous thing."

An acquaintance with the bees' order and acts is constantly revealing to our wondering ken some new fact or experience. Our mind is expanding gradually to the acceptance of new truths hitherto undreamt of. Observation, sharpened by so many unwonted wonders, penetrates what were previously unknown mysteries, and our minds are concentrated on marvel after marvel being unravelled and elucidated. Traits of arrangement, government, order, industry, and perseverance are manifesting themselves to our dawning intellect, revealing systems and transformations new and strange to our as yet limited understanding. Their very newness breeds a charm lacking in our later experiences, when all has become so common and so much of an everyday occurrence.

The neophyte standing on the threshold, dazzled and wondering, can see visions and dream dreams. His mind has awakened to the conscious existence of a new charm in life, which adds to the sweetness and zest of each returning season. The veteran sighs for those early days, those magic dreams, those too frequent evanescent reveries, those iridescent webs of ideal aims, those profuse determinations, those distant and dim anticipations of perfection. Yes, in embryo, at least, he has had dim gleams from this ideal land, and is undoubtedly the better for their enjoyment, even although too many of them have proved but a golden mirage.

The subject of my theme passes through the various evolutionary stages which mark the development and metamorphosis attending any subject from the embryo to the full-fledged imago. The period of incubation, development, and arrival at full growth may differ in time, degree, and measure of perfection, but (unless he falls out by the way, or lands in the Slough of Despond of F.B.), each phase is clearly marked leading up to the period when he becomes a master in the craft.

I have studied his evolutionary development in the query and reply column for about a full generation. We note him under the semi-anonymity of initials writing an almost confidential little note to the Editor imparting the fact that he has become the possessor of a colony of bees. Then a little later he wants enlightenment on some elementary subject as plain to the average understanding as that two and two make four. Gradually small puzzles are evolved—at times rather imaginary ones—and a kind hand helps him over the stile. As his horizon widens he has ideas of his own; he actually ventures to differ from the books. In theory, at least, his plans and processes are better—of course, in his eyes—than old, worn-out, hackneyed systems. At first, if modest, he either deprecatingly submits his "improved" theories as if he were shy of pitting his limited knowledge against a life's experience. Getting bolder by degrees, he casts his skin, and throws bashfulness aside, striking out in new and original paths of his own, and *improving* hives, appliances, fittings, and manipulative devices which, in his fond dreams, at least, are to revolutionise apiculture. Alas! for his ideals, there comes down that gentle but firm hand, tearing his theories to shreds and patches, and revealing to him that what he had raised were but ghosts of a long-forgotten past. This itch to invent soon passes away, and he is generally content to settle down and build on the firm foundation of long and well-tried experience.

The neophyte, alas! is not always thus amenable to discipline, but at times kicks over the traces, and develops disagreeable traits of human nature. One wants to know, "do you know," the Why and Wherefore of everything. It is not enough for him to be told that black is not white, but he demands, almost as a right, to have it all explained. Query follows query "thick as leaves in Vallambrosa," until the patience of our Editor—long-suffering, in general, as that of Job—runs out, and the recalcitrant is suppressed by the gentle hand in the iron glove.

Again (in my mind's eye) I see one eager neophyte hungering and thirsting for knowledge—bee knowledge—to an almost abnormal extent. He may, like Dickens's "Pip," be said to have been "brought up by hand"—the hand of our "Reply to Queries" Editor. Yet, when he had barely got out of swaddling-clothes, he became "top lofty," and would fain try to teach his teacher. Then, as soon as he had "come of age," he showed his gratitude by doing his best (or his poor little worst) to turn and "rend" him. Well might the assailed exclaim, "*Et tu Brute!*"

Another seems to have an "itching palm," intent on acting as sub-editor. Carping criticism seems to be his chief delight. He has an insatiable desire for amending, improving, modifying replies, footnotes, or casual observations, and he does it all with an assurance which can be bred only of ignorance.

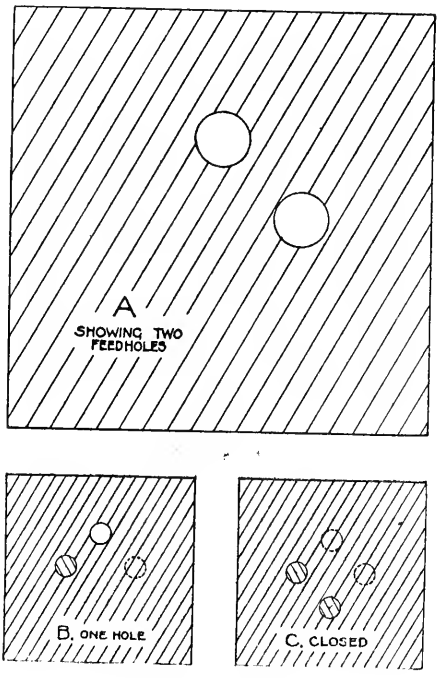
Almost every neophyte is an inventor in his own estimation. Here is what the veteran, G. M. Doolittle, wrote of him the other day: "Nearly every beginner thinks he can get up a hive just a little better than others are using, so he goes at it with a relish and a zest worthy of a locomotive inventor, till he finds, after using, that most of the older hives work better

than his 'new idea,' which he really thought was going to revolutionise the world."

These are only a few types or specimens of the very interesting genus neophyte, and his gradual evolution into what M. Maeterlinck calls the High Priest of Apiculture may form food for study at some other time.—D. M. M., Banff.

THE IDEAL HIVE-QUILT.

[6249.] My reference to the above on page 96 in B.B.J. of March 8 does not seem to have been perfectly understood by one inquirer, so, for the benefit of others, I give somewhat fuller details. The quilts are



THE IDEAL QUILT.

made from carpet—Brussels or similar smooth hard carpeting entirely preferred.

If the hive be square—as, in my opinion, all single hives should be—the quilts will be square also. Feed-holes are cut clean out of the material—a neat 2-in. hole, perfectly round, and in exactly the same place relatively to all quilts. It is advisable to keep a pattern or gauge to ensure this.

If the quilts are square, two feed-holes may be cut, and they should be at right angles as shown in sketch. The quilts may then be placed as shown in the positions marked *a*, *b*, and *c*, which give two, one, and no holes respectively. The advantage of two holes is that food may be given rapidly from two bottles at one time, or syrup may be given to stimulate, while there is also a reserve cake of candy in place.

Carpet has been objected to on the ground that it does not lie flat, but this refers solely to large pieces which have been folded to fit, for such squares as I have described lie perfectly flat, and any number may be used at once.

A thick porous quilt may be easily improvised by placing a large number of pieces of crumpled newspaper between two sets of quilts—thus, two quilts, a couple of inches of crumplings, and two more quilts, or, better still, a sack which may be tucked down to fit the "lift" in use.

For some years I have used compound quilts made from three thicknesses of felt sewn together and faced with duck, having a feed-hole closed by a plug made from the removed discs. The plug is hinged to the quilt by a piece of broad tape long enough to allow room for the base of the feeder. For a long time I thought these compound quilts very convenient, but I am now discarding them, as they wear out in favour of the carpet, for several reasons—the single pieces are less trouble to make; the bees do not gnaw them appreciably; they are, as explained, very adaptable; they are easy to dry; there is generally a clean side ready for the super; and last, but by no means least, they are nearly everlasting wear.—L. S. CRAWSHAW, Ilkley, Yorks.

SCOTCH HEATHER HONEY.

IN BARRELS AT LESS THAN 3D. PER LB.

[6250.] We should be glad to hear from Scottish bee-keepers whether it is possible for a firm of merchants in Glasgow to offer Scotch heather honey in 5 cwt. barrels at under threepence (3d.) per lb., ex wharf London? We should also be glad to know whether it is possible for a Glasgow firm to offer pure Scotch honey, of any description—heather, clover, or otherwise—in 5 cwt. barrels at under 3d. per lb., ex wharf London, and reap a profit and pay an agent's commission? As this is a matter of vital importance to Scottish bee-keepers we ask you to publish this letter, in the hope that it will bring us replies from the people most concerned.—SHAW BROTHERS, 12, Idol Lane, London, E.C.

[We are very pleased to receive the above letter for publication; nor do we think there will be any need to remind our Scotch readers of the important bearing it has upon the general interests of British bee-keeping, that of Scotland in particular. There need be no fear that the information asked for by Messrs. Shaw Brothers will not be readily forwarded by those who know most about it—viz., Scotch bee-men

who are honey-producers; and we think the action of the above-named firm is to be highly commended by all who wish well to British bee-keeping.—EDS.]

HOW BEES CLEAN THEIR ANTENNÆ.

[6251.] My thanks are due to Mr. J. Herrod (6240, p. 106) for confirming my suggestion that in reality bees clean their antennæ on the special apparatus of the nearest fore leg. In spite of the text-books, I have never seen them do otherwise. But as to the tongue, it is generally cleaned, I think, by the feet and the portion of the fore leg which is below the comb-joint. The attitude of the bee as she rests on her hind legs during the operation is very comical, and gives her the appearance of playing on the trombone.

I hope it is not ungracious to suggest that the £ s. d. side of bee-keeping is not the only one that deserves or, indeed, repays attention. It must be three years at least since I called attention—and that more than once—to the point of how the antennæ are cleaned, and Mr. Herrod alone has responded. As I am sure that this is not owing to any lack of friendliness on the part of my fellow bee-keepers, I cannot help feeling sorry that they should lose the great amount of pleasure obtainable from a closer attention to the personal habits of the honey-bee.

The problem of Mr. Herrod's promenading queen is a hard one. For some occult reason she may have been superseded last autumn, and yet allowed the grace of a winter's lodging, only to be turned out when the new queen took seriously to laying. Or the facts may touch the very interesting and not thoroughly settled question as to whether fertile queens do not sometimes take a pleasure-flight, of which apparent instances had been from time to time reported.—H. J. O. WALKER (Lieut.-Colonel).

UTILISING QUEENLESS BEES.

[6252.] I am sending herewith a small piece of comb for your kind examination of same to see if it is affected with foul brood, and if possible a report in next issue of B.B.J. It is taken from a stock built up from a very large swarm in 1904. The queen was an unusually prolific one, and, although of normal colour, her progeny had a tendency to show distinct Italian markings, as three out of every four of the worker bees were the same colour as Sladen's "Golden Prolific" strain, of which I had a queen last year. This variation of colour surprised me, because the queen in question could not have been mated to any drone from the "Golden Prolific" stock, as they did not have any drones flying last year. I am sorry to say this queen (the one from which I have sent comb) is dead, and I intended, if possible, to have reared a queen or two from her this year. My reason for asking if comb contains foul brood is because, if not, as there are several good seams of bees, I would unite them with a driven lot of last year, which are not over-strong.

Thanks to Bro. Columban for his recipe on page 363 of B.B.J. for September 14 last. I have made some lovely candy, and all my stocks (bar the two lots mentioned above) are in a flourishing condition. I must thank you for B.B.J.; I do enjoy it very much, and, save for "foul brood," I have not the slightest need to trouble you with any questions, as I mark and remember when I read anything, and thus save myself and you trouble. I am very much interested in the bee-garden picture every week, or nearly so. I have thought of photographing my apiary, as the hives would make a good photograph. Would you like to have one for B.B.J.? Wishing you every success, and thanking you in anticipation, R. L., Castle Cary, March 17.

[We regret to say there are signs of foul brood in comb sent. The stock cannot have been badly affected, as so few larvæ cells have failed to hatch out. There would not be much risk in uniting the bees as proposed if the weak lot is perfectly healthy. By all means get a photo of your bee-garden, and if suitable for a tone-block we will be very pleased to have it engraved for our "Homes" series.—EDS.]

EXCESSIVE SWARMING.

VENTILATION IN HOT WEATHER.

[6253.] As the swarming season will soon be here again, and this year I should like to prevent, or, at least, check, excessive swarming, may I ask for a little advice in the B.B.J.?

My bees are in a very sheltered position, with a long valley in front, wooded slope each side, and steep bank immediately behind, but no shelter from the sun. I may say it is the only spot available for the hives where they are no nuisance to my neighbours, who dislike bees, and the latter are, in consequence, given to excessive swarming. The first year of my bee-keeping with only one stock I had three swarms—one with old and two with young queens. The second year, with two stocks, I had three swarms—two with old and four with young queens. The third (last) year I had twelve swarms from three stocks—one hive swarming no less than six times—each stock swarming once with old queens and the other times being with young ones.

The stock that swarmed six times I looked through three days after first swarm issued, and cut out all queen-cells except two, but I suppose bees must have raised more cells in lieu of those removed, for the swarming fever with them lasted exactly a fortnight afterwards.

I should like to avoid this if possible in future, for I have now four stocks, and have not time to properly look after more, being away from home ten hours each day. I may also add that in each case, with one exception last year, I removed all queens when returning the swarms to parent hive, the exception being when, through a drenching rain, the swarm had been in the hiving-skep over forty hours, and I thought it advisable to return queen as well. In this particular case swarming thereupon ceased, and the bees yielded 45 lb. of extracted honey and eighteen 1-lb. sections from surplus brood-chambers, besides leaving enough stores in brood-nest for wintering.

This year, besides giving the usual super-room (racks of sections of supers must, of course, be well covered to keep bees in them at night-time), I propose giving more ventilation on principle shown in Fig. 35 of "Guide Book" (page 62); also, should swarms issue, I propose returning young queen with second swarm before six a.m. next morning, as I have seen advised in B.B.J. In view of carrying out this plan I ask: 1. Should it, under usual conditions, be sufficient, or is there anything more you advise me to try? 2. Should outer-cases be put on properly at night, except for being left raised from floor-board, or only when rain or cold weather comes on? Trusting you will excuse length of letter, and hoping your advice in B.B.J. will be of service to others situated like myself, I send name, etc., for reference, and sign—A. C., Sussex.

[1. It is what we have advised ourselves in print, and in our case it answered the purpose fully. 2. In all cases the bee-keeper should use his own intelligence in dealing with instructions given in books and journals. For instance, if hives are raised from floor-boards to give ventilation for the purpose of preventing the issue of undesirable swarms—should weather become suddenly cold at night—extra ventilation must be reduced; but in very warm weather we frequently left floor-boards and outer-cases raised as advised.—EDS.]

BEE FORAGE NEAR GLASGOW.

[6254.] In answer to your correspondent, "North Kent," who asks for information regarding Dumbartonshire as a bee county, I kept a few hives for three years in the Blane Valley, about ten miles north of Glasgow, in Dumbartonshire. The chief drawback there is the extreme variability of the climate and the large rainfall.

I do not think there is sufficient sunshine to make it a good bee-keeping district, though, as you get nearer Loch Lomond and the Clyde—about Helensburgh—it distinctly improves in this respect. On the average I used to get about 15 lb. of honey per hive from my four hives, but have no doubt better could be done near Balfron, Cardross, or Helensburgh. There is no lack of heather in the neighbourhood of all those places.

There is no reason why "North Kent" should not be fairly successful with his bees in Dumbartonshire.—W. R. LESTER, Beds.

[6255.] Another correspondent, who sends name, etc., and signs "Whistlefield," kindly writes for the information of "North Kent": — I know the district between Glasgow and Loch Lomond fairly well. Clydeside is, in my opinion, rather a wet district for bee-keeping, but I have myself kept bees for twenty years thirty miles west from Glasgow, and have taken 80lb. of honey from a single hive; though I consider 20lb. to 30lb. a very fair average crop. There is plenty of fine heather within a quarter of a mile from my own apiary, but we have had only one fair heather season in the last three years. If "North Kent" wishes some real heather honey, he will need to go back of Clydeside some distance, but there are some very fine heather hills in the neighbourhood. I think your correspondent had better wait till he has lived a short time in the district and judge for himself on the question of an out-apiary. Clydeside is mainly agricultural land, but there is plenty of heather when you get back a few miles. Wishing "North Kent" every success in his new home, I send name and sign — WHISTLEFIELD.

Queries and Replies.

[3236.] *Insect Nomenclature.* — Enclosed please find two insects that came out of the cocoons sent herewith, which I broke off the hedge directly over my bee-hives. You will see that there is still one not hatched out yet. I am curious to know if they are bees? And if so, what species? A reply through the BEE JOURNAL, of which I have been a subscriber for several years, will oblige a reader who is (name sent for reference) CURIOUS, Staines, Middlesex.

REPLY.—The insects sent are a large kind of saw-fly named *Trichiosoma*, which

is said to be common in districts where trees, especially elms, are plentiful. The larvæ feed on the leaves of the elm and other forest trees. The perfect insects appear in April and May. The cocoons, with their hinged lids like those of queen-cells, as seen in specimen, are very interesting to bee-keepers.

[3237.] *Bees Swarming Out of Skep in March.*—Last autumn I purchased a weak lot of bees in skep, and on Tuesday, the 6th inst., which was a very warm day, all the bees left the skep about noon, and clustered in a hedge close by. On examination, I found that the combs were quite empty, but a cake of candy given on the previous Friday was scarcely touched. I returned the bees to skep, but two hours later they had again left, and clustered in in the same place. The bees were again hived, but I left them in the hiving skep on their old stand till evening, before returning them to their skep, and placed feeder over with syrup. Being only a beginner, I shall be glad if you will kindly tell me (1) the probable cause of the bees deserting their hive? And (2 whether I have done right, under the circumstances? Thanking you in anticipation—T. C. M., Surrey.

Reply.—1. The foodless condition of their hive caused the bees to leave it as what is commonly known to bee-men as a "hunger swarm." After gaining a little more experience you will know that bees will often die of hunger with candy within a few inches of them. Care must still be taken that the syrup given is being regularly carried down, or the bees may die before food can be had outside. 2. You have done very well in at once giving liquid food, and let it be good syrup given warm, not thin, watery stuff.

[3238.] *Moving Bees in March.*—My bees having been flying freely for the last few days, and I want to move them to the other side of a building. If I move them now, will bees return to old place, and be unable to find any home, or must I leave them until we have had a few days' bad weather? Apologising for troubling you. —R. G. E., Knowle.

Reply.—To change the location of hives to the other side of a building at this season would involve some risk of losing a few bees. But the loss may be minimised by altering the appearance of the hive fronts for a week or so after removal. This is easily done with the help of a leafy branch of a tree being laid across the flight-board, so that the bees are compelled to thread their way out through the twigs and leaves. After a flight or two the twigs may be removed.

[3239.] *Stocking Hives in Cheapest Way.*—1. Having bought six hives, would you please tell me the cheapest way of stocking them with bees? Would you advise doing it by purchasing nuclei and working them up into stocks? Swarms are expensive. 2. If full sheets of foundation (wired) are used, is it absolutely necessary to have the frames 1¼ in. apart to prevent drone-breeding?—I send name, etc., for reference, and sign—Scotland Yet, Arran, March 17.

Reply.—1. It will, in our opinion, be found more economical to stock your hives with good natural early swarms than in any other way, especially since you are proposing to supply the bees with full sheets of foundation. By placing an order for half a dozen swarms to be delivered early in June the bees would, if fed for a few weeks, have combs built and a lot of brood hatched by the time your gathering season began in Scotland, and if favoured with fairly good weather might reasonably hope to secure surplus honey enough to pay for swarms and leave a margin over. 2. There is no need whatever for spacing frames at the 1¼-in. distance if full sheets of foundations are used when hiving swarms.

[3240.] *Bees Dwindling in Spring.* — I am in a dilemma, and fly to you for assistance. To-day I examined my stocks by lifting quilts and peeping in, and as there appeared to be no bees in one of them, I determined to have a thorough examination. I found that, although healthy enough, there were scarcely enough bees to cover one standard frame, but the queen seemed quite healthy. She is a young and valuable queen, and I feel to lose her like this. The only old queen I have heads a stock in a "Stewarton" hive which I intended transferring next month to a bar frame hive. It would be rather difficult to get her out of that without driving the bees and catching her, so this makes me ask: 1. Should I do this now and unite the two lots? The hives are Nos. 3 and 6 respectively in the single row of stocks in my apiary; but as the bees in No. 6 have not been flying, the two lots could be put into No. 3, which is the "Stewarton" hive. 2. If I unite shall I run them into the "Stewarton" hive again, or into hive which contained lot No. 6? I think the cause of dwindling was outside seams of bees getting chilled. There is no brood or disease in hive, and plenty of stores. 3. If I am not to do this, what can you suggest? The season is very late here, and the bees have not had a proper cleansing flight yet, although they have been on the wing very often. The site is at back of house, and sun has not yet shone direct on them, not being high enough yet to get at site over top of house. 4. I suppose it would be

impossible for No. 6 to pull through spring in its present condition. I have wrapped them up with warmed quilts, and given warm flour candy, to try and keep queen alive, till I hear from you. Candy was on hive all winter, and was taken, but bees only covered four or five frames in October. You can condense this query as you think fit. Trusting to have a reply in B.B.J. this coming week—D. M. P., Greenock, March 12.

REPLY.—1. The point to consider is: Why is the stock—headed by "a young and valuable queen"—so weak that the bees "scarcely cover one frame"? If this weakness is due to the queen's unprolificness she is the reverse of valuable, and in that case you may be a loser by sacrificing the queen now in "Stewarton" hive. If the latter is doing well we should kill off the queen in question and unite the bees as proposed. 2. Yes. We cannot think that the bees have been reduced in numbers through spring dwindling. 3. The reply to No. 1 answers this query. 4. Quite impossible.

[3241.] *Unmated Queen in Hive.*—I wrote to you on November 13 last mentioning the fact that drones were flying from a hive belonging to a friend as late as November 1. In your reply on page 460 of B.B.J. for November 16 you said there "were valid grounds" for suspecting that the stock in question was queenless. Taking the first opportunity since that time, I have now examined the frames, and find no brood except a few worker cells scattered over the face of comb, projecting beyond the usual width as described in "Guide Book," page 16. There are a great many bees, and they appear strong and healthy, as in autumn. There is also plenty of sealed food, and the bees fly freely on fine days. As I have only one stock, will you kindly advise me?—A. J. H., Chadwell Heath, March 17.

REPLY.—The fact of drones being reared in worker cells makes it clear that the queen is unmated, and consequently worthless.

Notices to Correspondents & Inquirers

G. S. (Cardiff).—Deep-cell Foundation.—Your sample is very good indeed, so far as it goes, and if the difficulties (which are very great) still to be overcome can be surmounted there is good value in your effort. Unfortunately, however, several capable men have got even beyond the small specimen from your press now before us, and yet have stopped a long way short of complete success. We do not say this in discouragement; but when firms with plenty of capital and thoroughly practical men at command have so far failed, the least we can do is to mention this, so that you may not be over-sanguine. Go on by all means, so long as you work in spare time only; and we heartily wish you full success.

A. G. Abbott (Devon).—Diagrams on Bee-Keeping.—The diagrams shown on page 47 of B.B.J. for February 1 are unfortunately out of print. You might possibly obtain a set by an advertisement in our prepaid column.

A. J. R. (Heston).—It is not at all unusual to have hives located so near as four yards from houses without causing any nuisance. In such cases, however, the hives should stand so that the bees, forward flight is away from the house, not towards it.

A. McD. (Glenurquhart).—Candy Making.—Your sample appears to be hardly boiled enough, and rather too watery in consistency. It is curious how well some succeed with the Guide Book recipe, while others fail. (See reply to E. M. M." in this column.)

Honey Samples.

"DIMPLE" (Yorks).—Your sample is probably genuine, but we do not like a granulated honey that is so soft as to run out of jar when inverted. This kind of honey is strongly reminiscent of the foreign honeys imported, and often sold as "British." 2. The flavour is full, but a bit coarse, and we should place it as about third grade in quality. It is from mixed sources.

J. A. B. (Bridge of Allan).—Sample is a nice, granulated honey from mixed sources (mainly clover). The quality is good.

Suspected Combs.

AFRAID (Herts).—The largest piece of comb sent (which we take to be No. 1, though not marked) contains foul brood of old standing, and all combs like sample should be promptly burnt, as being worse than useless. The five small pieces of crushed-up comb, though not fit for examination, so far as regards disease, are so old, dirty, and pollen-clogged, that they too had better be burnt.

INQUIRER (Lincs).—Comb sent is affected with foul brood of old standing.

NOVICE (Blackheath, S.E.).—1. The seller cannot have any knowledge of foul brood, or surely would never have declared the hive to be "free from any disease." The comb sent is badly affected with "F. B." of old standing. 2. The bees, if strong enough to be worth saving (which we should very much doubt) might be got off combs and treated as a swarm. But it will, we fear, involve a task beyond the powers of a beginner to save them.

******* ***Some Letters, Queries and Replies, &c., are unavoidably held over till next week.***

Editorial, Notices, &c.

BRITISH BEE-KEEPERS' ASSOCIATION

The annual general meeting was held on Thursday, March 22, at 105, Jermyn Street, S.W., under the presidency of Mr. T. W. Cowan. Among others present were Mrs. E. E. Ford, Miss Gayton, Miss Hallowes, Colonel Walker, Rev. W. E. Burkitt, Messrs. R. T. Andrews, L. Belsham, T. Bevan, W. Broughton Carr, Geo. Dow, C. Dunn-Gardner, W. Herrod, Percy Kemp, R. Lee, A. D. Matthews, J. C. Mason, C. T. Overton, A. G. Pugh, W. F. Reid, P. Scattergood, W. Sole, G. H. Sander, E. Walker, T. I. Weston, J. Willard, and the Secretary. Apologies for inability to attend were read from the President (the Baroness Burdett-Coutts), General Sir Stanley Edwardes, Dr. Elliot, Messrs. Jesse Garratt, J. Gray, W. H. Harris, H. Jonas, J. B. Lamb, W. P. Meadows, F. W. L. Sladen, S. Watts, and W. Woodley.

The minutes of the last annual meeting having been read and confirmed, Mr. Cowan, in moving the adoption of the report and balance-sheet, said that the members would regret to learn that the President was unable to be with them at the meeting. It was, however, especially gratifying to know that her ladyship had sent through the Secretary an expression of her unabated interest in the society's welfare, and an intimation of her intention to offer, for the encouragement of cottage bee-keepers at each of the County Affiliated Association's Shows during the coming season, a complete cottager's frame-hive, to be awarded to the bonâ-fide cottager member exhibiting the best sample of honey, the produce of his own bees. He was quite sure they would welcome this most generous offer and desire to thank the Baroness for her kindness. (Applause.) The report in the hands of members would show that their financial position was very much as it stood twelve months ago, although the number of members was slightly less, and he ventured to urge upon them the desirability of securing additional subscribers. The educational and experimental work carried on at their apiary at Swanley was very valuable, tending to the extension of bee-keeping, and the results of the pupils' examinations testified to the excellent teaching and work of the expert Mr. W. Herrod.

The report of the judges at the Royal Show called attention to differences in measurements of frames and sections in use in this country, and this matter would be further considered with the object of securing uniformity, if possible.

Mr. Andrews seconded the motion, and suggested that in addition to securing new members, a number of the present subscribers might well afford to increase their subscriptions beyond the small figure of 5s. annually.

The resolution was then put and carried unanimously.

On the motion of Mr. Willard, seconded by Mr. Sander, a vote of thanks was passed to the retiring Council and officers.

Colonel Walker proposed that the thanks of the society be accorded to the Royal Society for the Prevention of Cruelty to Animals, for the gratuitous use of their Board Room for committee and other meetings. These facilities added very much to the comfort of their gatherings from time to time, for which they were very grateful. Mr. Pugh, in seconding the motion, referred to the invariable courtesy at all times of the officials of the society. The resolution was carried with acclamation.

The re-election of the President, Vice-Presidents, Hon. and Corresponding Members, Treasurer, Auditor, and Analyst for the year 1906, was proposed and carried *nem. con.*

The retiring members of the Council were also unanimously re-elected for a further period of twelve months.

The Chairman referred in feeling terms to the loss the society had sustained by the deaths of Dr. Bartrum and Mr. J. M. Hooker, and the valuable services each of these gentlemen had rendered to bee-keeping in the past. On his proposal, seconded by Mr. P. Scattergood, a vote of condolence with the surviving relatives was unanimously passed.

A meeting of the Council was held subsequently, when two new members were elected, viz.:—

Mr. Thos. Gower Bergin, Barkway, Sheepcote Road, Harrow.

Mr. Henry Marrs, Newtonairds, Dumfries, N.B.

The Finance Committee's report was presented by Mr. T. I. Weston, and duly approved.

Mr. T. W. Cowan was elected as Chairman, and Mr. T. I. Weston as Vice-Chairman, for the ensuing year, with thanks for past services.

It was resolved to hold the examination for first-class expert certificates on Thursday, May 16, and the second class about the middle of November, as usual.

Meetings of the Council are proposed to be held on the third Thursday in each month, with the exception of August and October—the next meeting being arranged for Thursday, April 19.

After an interval for light refreshments the members reassembled for the usual *conversazione*, which will be reported in our next issue.

LEICESTERSHIRE B.K.A.

ANNUAL MEETING.

The annual meeting of the Leicestershire Bee-keepers' Association was held at the Highcross Coffee-house, Leicester, on Saturday, March 17, there being nearly 100 members present. Ald. Wakerley presided.

The annual report showed that 42 new members had joined during the year, the total membership at the present time being 259. The annual exhibition at the Abbey Park Show was a great success, the number of entries being 125, against 92 the previous year, while the quality of the honey was excellent. The report drew attention to a movement to obtain legal powers to deal with "foul brood," otherwise known as "bee pest," and said, fortunately, Leicestershire was not suffering severely through this scourge; but the committee, taking into consideration the possibility of its importation from other counties, had rendered all the assistance it could in furtherance of the movement. The balance-sheet showed the year's receipts as £69 8s. 4d., and the payments £69 5s. 3d., balance in hand being 3s. 1d.

On the motion of Mr. Carter a vote of thanks was passed to the retiring officers, and the following officers were re-elected: Treasurer, Mr. H. M. Riley; auditor, Mr. E. J. Underwood; hon. secretary, Mr. J. Waterfield; and representatives to meetings of the B.B.K.A., Messrs. Meadows and Waterfield. His Grace the Duke of Rutland was appointed president, Mr. Meadows as chairman, and Mr. Roper vice-chairman, while the following were elected to form the committee:—Messrs. S. Clarke, T. H. Geary, Drake, J. Fewkes, J. G. Cotton, J. W. Smith, E. A. Jesson, G. Palmer Dunn, W. Ridley, G. Levers, S. G. Godkin, and W. K. Bedingfield.

Correspondence.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

NOTES BY THE WAY.

[6256.] Small wonder that the ancients adjured us to remember the "Ides of March." The present month has been a deplorable time for the poor bees. The first week it rained nearly every day, the second was dull and cheerless, and not till the 17th did we have a spring-like day, since when there have been frequent falls of snow, with winds as keen as though Old England had been transferred to the North Pole. According to the almanacs, spring began on March 21 (five days ago), and her advent has not been heralded in by even an hour's sunshine—she still delayeth her coming—so we must "wait and hope."

The careful bee-keeper will see that his bees do not lack food, and that a supply of artificial pollen is in some cosy, sheltered spot near the hives, so that the bees may secure this necessary ingredient for feeding the young brood; this will help to tide over the barrenness and lateness of the season. The aim of the bee-keeper who works for profit should be to stimulate the continuous growth of each colony till the honey-flow begins, seeing that the main element of success lies in getting his hives full to the top-bars with bees and hatching-brood, thus adding to the strength of the field forces ready for the honey-harvest. The hive that reaches that standard is the one which will break the record, and should it cast a swarm, the latter will be of the greatest utility in carrying on the work in the supers if hived and placed on the old stand, and the parent hive removed a yard or two away. If this plan is followed the entrance must be turned in another direction; the surplus arrangements must also be transferred to the top of the new swarm, always taking care to use excluder-zinc, and thus prevent the queen from passing up into the sections.

In order to attain this desirable condition by about June 10—in the South, of course—when white clover begins to yield its first honey for the year, we want, first, good strains of prolific bees well stocked with stores, young queens bred last year (or, at most, not beyond their second year); and, next, sound weather-proof hives to guard the bees from cold winds and the frosty nights of early spring. The quilts and wraps above brood-nest should be dry and warm. Food should also be given when natural food is scarce; this will stimulate brood-rearing with the additional advantage that any surplus food given is not consumed in waste, but it is stored up for future requirements.

As the season advances all surplus arrangements should be got ready for use, so that no time is lost in giving supers in advance of the bees' requirements. By neglecting this precaution the best and strongest colonies may prepare to swarm, and then, unless you utilise the working propensities of the new swarms, your profitable honey-harvest will in all probability be another year in realising.

Do not forget the sowing of seed for bee-flowers later on in the year, and also induce your neighbours to do the same, thereby adding to the honey-harvest.—W. Woodley, Beedon, Newbury.

SCOTCH HEATHER HONEY.

"IN BARRELS AT LESS THAN 3D. PER POUND."

[6257.] Knowing the "outs and ins" of Highland bee-keeping as intimately, perhaps, as any one person can, I emphatically reply to Messrs. Shaw Bros.' query (6250, page 116) that the offer is utterly impossible as regards heather honey. Further, it is my opinion that no *genuine Scotch* honey of any description can be offered at the absurdly low price of 3d. per lb. On the contrary, heather honey sold readily at 1s. 3d. per lb. upwards, and I had any number of orders which I was quite unable to fill after making extensive inquiries, although several customers offered 1s. 6d. per lb. Pure clover honey sold readily at 10d. per lb.

I think it is high time that heather-men should rouse themselves to put down such attempts as were made last year, and which are evidently now being repeated to foist honey on the public, which is not what it is stated to be, and I am credibly informed this honey "has not a bit of heather about it."

Now, the question is one which can easily be tested and proved one way or the other. If Messrs. Shaw Bros. will put me in communication with this Glasgow firm I will take any quantity, provided the sample submitted will be recognised by three competent judges as "*genuine Scotch heather-honey.*"

Meanwhile I think bee-keepers owe a debt of gratitude to Messrs. Shaw for so promptly declining to have anything to do with the "deal," and to our Editors for refusing to benefit themselves by advertising such a shady transaction. Such high principles are more to the advantage of bee-keepers than most of them are aware, and to my knowledge we have been thus benefited repeatedly by their neglect of self-interest when they knew that their act was for the advantage of the craft.—D. M. MACDONALD, Ballindalloch, Banffshire.

[6258.] On opening my B.B.J. for this week and reading over the above heading, I felt somewhat amused, and at once came to the conclusion that here was a firm inclined to go one better than the announcement made in this journal about twelve months ago to the effect that tons of the finest Scotch honey were on offer in London at 4d. per lb. On second thoughts, however (and these are always said to be best), I felt certain that Messrs. Shaw Brothers were here acting in a fair and honest manner to the public at large, and I entirely agree with our Editors that their action is to be highly commended, by asking for information from Scotch bee-men whether Scotch honey of any kind has ever been sold at anything approaching the price stated, viz., 3d. per lb.

No doubt it will be admitted that producers of the real article ought to know its selling price to the trade, and I have, therefore, pleasure in complying with Messrs. Shaw Brothers' request. For myself, then, I may say that for about twenty-five years I have been largely engaged in the honey-producing trade, and during that time have perhaps secured more honey than any single individual in Scotland. I have also been in touch with the majority of our largest honey-producers throughout Scotland during the whole of that period, and know quite well their selling prices. But in no single instance have I known of Scotch honey of any kind whatever being sold at anything approaching the figure given in Messrs. Shaw's letter, and I challenge any firm of merchants in Glasgow, or anywhere else, to name a single bee-keeper who ever sold to them an ounce of Scotch heather honey at the price of 3d. per lb. I think every Scotch bee-man in the country will join me in the challenge which is here given.

For the information of the general public I may state that Scotch heather honey is very seldom sold by the producer in bulk to the trade. Most of it is sold in 1-lb. glass jars at the wholesale price of not less than 9s. per dozen. Special samples command a much higher figure. But for many years the frequent adverse seasons have told so heavily against the raising of the "real Scotch" heather that it is impossible for any beekeeper to place it on the market in such enormous bulk as stated on page 116. —WILLIAM MCNALLY, Glenluce, N.B.

NUPTIAL FLIGHT.

[6259.] I have on several occasions observed the mating of queen bees, and I wish now to record the facts as witnessed during the season of 1905.

My observations were made on dull days, when the sun was partially veiled, for on such a day one can look directly into the sky without being dazzled by the sun.

It is my belief that young queens never fly as high as we have been led to believe by past writings on the subject, nor do I believe that it is natural for them to go very far from the hives. From my observations I judge that a mating zone grows smaller and smaller by the increase of the number of drones in a given location.

In my mating-yards, during the height of the season, there are at least ten thousand drones, and if half this number should be on the wing I doubt very much if any young queen could possibly get very far before being caught.

I will try to picture the action of the drones when young queens, due to mate,

are in the air. They form in a flock (somewhat like geese) when in full pursuit of a queen, but do not fly steadily, as do geese; they slow when the queen slows and speed when the queen speeds. This gives a sort of jerking motion to the entire flock as it swiftly circles above.

When the flock first forms there may not be more than three or four drones, but others soon join in the chase, until they number perhaps eighteen or more. All the while the rear drones are grappling with the drones in advance, and come tumbling down together. These fellows, however, soon join in the chase again. I have seen the drones grapple each other thus until only three perhaps remain close to the queen—she may then dodge about in the air, and thus slip away from the few left, to reappear at another point along with another flock of suitors. The flight is wondrous swift, and one must be vigilant to keep track of it all. If you happen to be in a mating-yard on a dull day, when young queens are due to fly, on looking up you will certainly see what I have outlined above.

On one occasion the queen and drone fell at my very feet, and I watched the queen free herself from the drone. This done, I observed that the drone did not die instantly, nor did he explode, as the text-books have often said; he lived, but of course was injured. He could make attempts to fly from blade to blade of the grass.

Drones are frightfully rough in their action when in flight with a queen. They fly at each other and at the queen as though to tear limb from limb. The queens are sometimes injured in this tussle in the air. Once an injured queen fell upon a bush near me. The drones came with her down on that bush; some staying about all the afternoon expecting the queen to fly off again, but she did not fly, and after a while the drones went home disappointed.

The most impressive mating scene I ever witnessed was late in September. The day was dull, but quite warm. When I stepped into the yard there were at least three queens in the air on mating bent. These three queens gathered together in that yard more drones than I had ever before seen in flight in one spot before. The flocks whizzed by my head repeatedly, and I was kept busy in keeping track of it all.

Several times I rushed to a knot of drones in the grass with the expectation of finding a mated queen; but, lo and behold! only a lot of angry drones tussling and mauling each other. They were soon off, however, and, in the air, were forming into flocks again. This scene lasted fully twenty minutes, until I at last saw a queen and drone come down in tumbling motion, and I was certain that I had seen all there was to be seen. I rushed up, and watched the queen free herself from the drone.

I captured the latter and caged him. He lived over five hours, and it is my belief that he would have lived much longer if proper food could have been supplied.

In a future letter I will try to tell fully of the action of the drone parts, if I can manage suitable drawings for purpose of illustration. — F. L. Pratt, Swarthmore, Pa., U.S.A., March 6, 1906.

INCREASING STOCKS

AND CHECKING SWARMING.

[6260.] The following is a description of the plan on which I propose to work my eleven hives in the coming summer. There is nothing original in it; in fact, it is merely a collection of hints and advice given at different times in the B.B.J. by several of its well-known contributors. These ideas I have endeavoured to put together, as it is better to have a fixed plan of some sort to work upon, instead of leaving everything to chance, and I should be glad if you will tell me if there is any hope of its working out right? The reason why I desire an increase of seven stocks is because I am making six new W.B.C. hives, and these I am anxious to have occupied. I also wish to have at least one spare nucleus in case of need. I have kept bees for two years, but, so far, have not been able to prevent them swarming. Briefly put, what I wish to know is:—How to work eleven hives during the coming season, so as to check swarming, and secure an increase of seven stocks? In doing this, I propose to treat seven as follows: First, feed up each stock so that the queen is stimulated to lay, and in this way get her to fill the brood-box of ten or eleven frames with eggs and brood, before the main honey flow. When this is accomplished take an empty brood-box and fill it with nine frames of foundation (or empty combs). Then take a comb of brood and eggs on which the queen is found, from the parent stock, and put the latter in the centre of new box, between sheets of foundation. Now lift the brood-box from parent stock from its floor-board, and put the new one in its place with a queen-excluder above the frames, and upon this place the old brood-box, and fill up the space from which the brood-comb was taken with a sheet of foundation, or empty comb. The parent queen is now below with a comb of brood and plenty of room for laying, and above the excluders are the combs she has already filled with brood and eggs. In ten or eleven days most of the brood will have hatched out. A nucleus must then be made

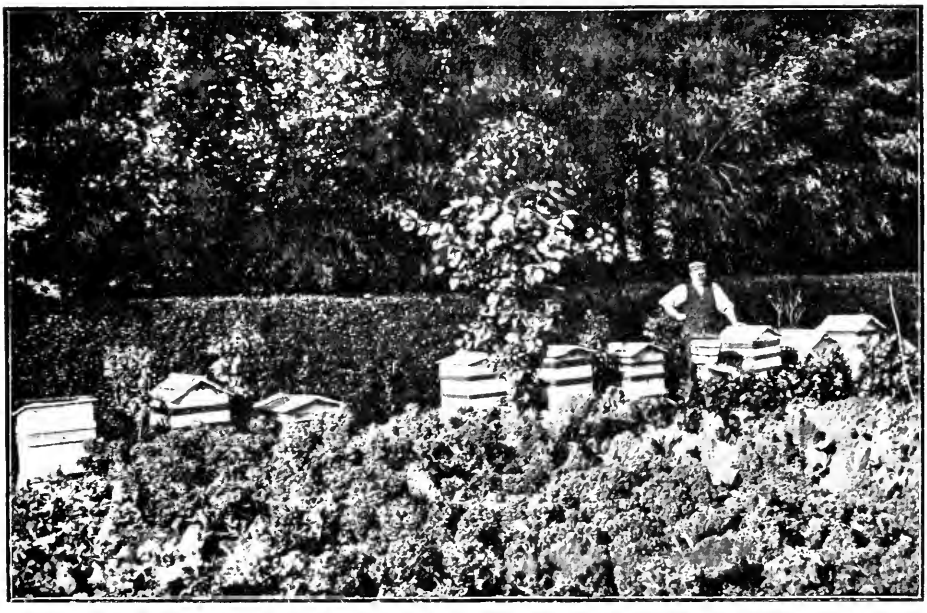
(*Continued on page* 126.)

HOMES OF THE HONEY BEE.

THE APIARIES OF OUR READERS.

In Mr. Coles, seen in his apiary on this page, we have still another bee-keeper — among the many whose experiences have been recorded in our bee-garden articles, who have clearly demonstrated the fact that anyone possessing some natural aptitude for bee-keeping, along with the knowledge of a handy man in the use of tools, need not be deterred from making a start on account of the cost. We may say this in view of the workmanlike hives seen in the picture, all of which are home-made from used boxes. For the rest, Mr. Coles writes of his experiences as follows:—

"I am sending photo of my apiary with a few notes of my bee-keeping experiences. I may say that although I have helped people at different times to smother their bees in former days I never caught the bee fever myself till I secured a stray swarm four years ago, which I hived in a nail-box. Then a friend told me of the B.B. Journal, and kindly borrowed one for me to see, and on reading same I at once ordered it from my newsagent to come weekly. Then followed the 'Guide Book,' which I think is the real chart in giving us the right course for bee-keeping. I have been fairly successful without having any large 'takes' to record, and the honey is not of bad quality, being good enough to secure me twelve prizes at local flower shows this year, six of which were firsts. I do not try queen-rearing on the up-to-date plans, but I make my own hives; indeed, all of those in front of the figure of myself shown in photo except two being home made and from used boxes. The bucket shown is the water supply, which drips on canvas tacked on to a board. My apiary has escaped foul brood so far, although the pest is in our district. I have occasionally found a few grubs of the wax-moth, but only in the second-hand hive that I bought. I have tried the Rymer honey-board on one of my hives, and like it better than queen excluder zinc. In most of the methods now in use, such as driving bees, uniting weak colonies, etc., I have never found any difficulty whatever. The two lots that I have united, one was queenless. I recently put a driven lot of bees and queen to a queenless colony by simply flouring both lots well, and they settled down quietly without any trouble. This year I united some stocks for one of my neighbours. These I dusted well with flour, and put a good pinch of tobacco in the smoker, giving a few puffs well into the hive, and treated the other hive the same, so that both had the same scent, and the result was that they settled down nicely, no fighting whatever. I may add that I follow the occupation as smith on an estate, so that bee-keeping and gardening is a nice change.



MR. GEO. M. COLES'S APIARY, HEYTHOP, CHIPPING NORTON, OXON.

"*Increasing Stocks and Checking Swarming*,"

(*Continued from page* 124.)

by shaking the bees from five or six frames into a small hive. The queen being safely kept in body-box below there will be no fear of removing the queen with the nucleus, and the room given will have effectually checked swarming, as the queen was given plenty of egg-room below, while a good proportion of bees have been taken away for the nucleus, but not enough to check honey gathering. (1) The box of nearly empty combs can now be left for the bees to fill with honey, or (2) if the queen is again short of room in the lower box, a few of the empty combs can again be exchanged for those full of eggs and young brood; or (3) if the queen has plenty of room without this last exchange, the combs can be utilised for nuclei, etc., and shallow-frame supers, or sections, take their place. Thus all the brood is saved, the parent hive is not denuded of too many bees, and a very fair nucleus is formed, mostly of young bees. In the meantime one of the four remaining nuclei must have been well fed also, and rather cramped for room, so that it has been forced to make queen-cells in preparation for swarming. Then having got these ripe, or nearly ripe, queen-cells, prepare the seven small hives for the nuclei as follows:—Put into each five combs, with honey in some of them (or four frames of foundation and one comb of honey), and have the quilt-coverings of each drawn over most of the frames, only leaving so much uncovered space as to allow of the bees being easily shaken into the nuclei, after which they must be all covered up, a bee-tight roof put on, and the entrance screened so that no bee can escape. Plenty of ventilation must, however, be provided somehow. This can be done by cutting holes in the hives and covering them with wire-cloth. These holes are useful sometimes for introducing queens to the nuclei without having to open the hive, and they can be plugged with corks when not wanted. When the bees are safely in remove the queenless and broodless nuclei to a cool dark place for twenty-four hours, then introduce the young queens, or the ripe, or nearly ripe, queen-cells, and remove the nuclei a mile away, and leave them for a few days; of course, opening the entrances to let the bees fly. When they are brought back they can be transferred to W.B.C. hives by lifting the combs, with the bees adhering to them, into the larger hives, but perhaps they had better be allowed to fly from the nuclei placed on the stands the W.B.C. are to occupy till the young queens are safely mated. If honey is not coming in they must be *fed*, and it would be better to mix some honey with the syrup.

The remaining three hives must be fed moderately to work them into strong stocks for honey gathering, and room given them in advance as they require it. If they make preparations to swarm, cut out the queen-cells and remove some of the frames of eggs and brood, giving empty combs, or foundation, in place of these. If they do swarm, put the swarm back, cut out queen-cells, and give room as above. Supposing the stock from which the queen-cells for the nuclei was removed makes more, it must also be treated as above.

In this case there will be several spare brood-combs from some, or all, of these four hives. Can these be distributed among the nuclei, supposing these to have been formed a week or more, or would it only be safe to give them to those nuclei whose queens have been safely mated? I send name, etc., and sign—GRIP, Ellon, Aberdeenshire.

[The plan proposed is interesting, and not exactly in accordance with the usual procedure; but if operations are deferred till the weather is warm and settled, there is no reason why it should fail. Much will, of course, depend on the way in which the work is carried out, but if well done it should succeed. Anyway, we shall be very pleased to hear the result, especially as our correspondent is a lady bee-keeper.—EDS.]

BEE NOTES BY A BEGINNER.

AN ENCOURAGING REPORT.

[6261.] Being an amateur in bee-keeping, I take the liberty of sending you a few notes on my first season's experiences. I started last year with two stocks (swarms from previous year), and, knowing nothing whatever about the craft, I allowed the bees to swarm. The first one came off on May 15, and by the middle of July I had eight swarms all duly hived. One of my stocks, after swarming twice, produced a drone-breeding queen, so by the aid of the "Guide Book" I united the bees with a swarm. I only got my first B.B.J. on May 18 last year, and had to pick up what little knowledge I possessed from the "Guide Book" lent me for a fortnight by a fellow-workman, and the JOURNAL. However, even with this slight knowledge, I managed to secure about 80 lb. of honey, mostly from sections, and in addition have also got about 140 drawn-out sections ready for use this season. I have been a close student of the JOURNAL ever since I first commenced to take it, and am sorry I had not the advantage of its help when I first thought about keeping bees. My experiences have been very similar to those of others recorded in its pages, except that I have had a good deal of trouble through too much swarming.

My first swarm threw off a virgin swarm

on the seventeenth day after it was hived; then a month later a 7-lb. swarm left their hive, and three days later a cast came out weighing about 3lb. In fact, I was overwhelmed by seeing such rapid breeding, and did not know how to keep the bees under one roof. By the time the honey-flow ceased I had seventy standard frames of bees and two skeps in the garden.

I started feeding in September, and gave about 10 lb. of syrup to each colony. I also bought four stocks cheap from a person who had to remove from this district. Every colony was strong on the wing yesterday, and taking in pollen abundantly, so that I expect they will do well for me this coming season. I have spent all my spare time reading all the bee literature I could get hold of, and my old BEE JOURNALS are pretty well worn by handling.

Bee-keeping has opened out a new world of pleasure to me which I had never dreamt of. I never had a more exhilarating time than I had while taking and hiving those eight swarms, and my enthusiasm was such that I recovered the only swarm that took wing and left the garden at a distance of four miles, after an absence of eleven days. This was the seven-pounder. Being a disciple of Darwin and a real evolutionist, the bees are a source of never-ending delight to me; and though I am not rich in this world's goods I would consider myself amply repaid if my hobby only made "ends meet."

I have much enjoyed reading Mr. Cowan's "Honey Bee," more particularly the chapters on Parthenogenesis. This phenomenon struck me most forcibly, as it happened that I had a drone-breeder in my own garden. Previously to this I should not have believed it possible for a creature to produce young without having been previously fertilised, but have now had ocular demonstration of the fact. During my one season among the bees I have learnt many things only suspected before. When the honey-flow stopped I got a fine illustration of the "balance of power" between different colonies of bees; some had to be protected from their stronger neighbours, or it would have been a case of "survival of the fittest." I shall forward a photo of my apiary later on when the garden has donned its summer garb, and if you should think it fit for the "Homes of the Honey Bee" I shall feel very proud. When I look round on the bee-keepers in my district and see the loss they sustain by stocks dying off during the winter and spring, it makes me despondent to think that it is an unnecessary waste of valuable life, which might be saved by the possession of even a little knowledge of the subject.

I know at least a dozen amateur bee-keepers who do not read the B.B.J., and cannot understand why this is so; but one thing is certain, and that is that without such a valuable aid as the JOURNAL it is not possible to keep bees on modern lines. I only wish someone had given me a copy of the B.B.J. many years ago, as I have missed years of pleasure and profit by my ignorance of this delightful hobby. —J. J. M., Laxey, Isle of Man, March 20.

[We congratulate our correspondent on his first season's report, and look forward to his becoming a successful bee-keeper of the best type.—EDS.]

SUGGESTED CONFERENCE
OF COUNTY ASSOCIATION SECRETARIES.

[6262.] Referring to the letter in B.B.J. of the 15th inst. (6242, page 107) suggesting a conference of secretaries of county associations, I am heartily in accord with Mr. Richards's proposition, and think it well worth a trial, for although the County B.K. Associations are invited by the parent body to send delegates to their conferences, it is, to my mind, not so advantageous to the former as a conference of county secretaries would be. The meetings of the British Bee-keepers' Association are no doubt of great interest to individual bee-keepers, yet I do not think they sufficiently benefit to associations as a body; although there may be several secretaries who attend these meetings, they do not actually get into close touch with each other as regards the work of their respective associations.

This being the case, County B.K.A.'s are apt to fight shy of paying the expenses of delegates to these meetings, whereas, could they see that the affiliated society would reap some benefit, this shyness would not occur. I have before me the circular convening the annual general meeting of the B.B.K.A. to-morrow, and, although the meeting is followed by a conversazione, I fail to find any subject on the agenda that would warrant me debiting my association with any expense in attending. Yet this same agenda will no doubt prove most interesting to the individual bee-keeper, but that will not, as far as I can see, help the B.B.K.A. in any way. I fear I have already trespassed too much on your valuable space, but would like, in conclusion, to wish Mr. Richards every success in his project, feeling that it will not only do good amongst the county associations, but will also bring them into closer relations with the B.B.K.A.—R. H. COLTMAN, Hon. Sec., Derbyshire B.K.A., Burton-on-Trent.

A SPRING EXAMINATION.
"GOLDEN PROLIFICS"—CHEAP FEEDERS.

[6263.] March 18 being the first fine day here for some time, I took the opportunity of having a cursory examination of my nine hives. All were breeding except a

nucleus; this had no pollen in, so I dusted one of the empty combs with pea flower. I was astounded on looking into my "Golden Prolific" colony (a 1905 queen from Ripplecourt Apiary), the eight frames I had wintered the stock on being just crammed with bees, and four frames practically one mass of brood both sides. Not one of my other stocks ("black bees") is anything like this for condition. It should do some good work if the weather is only favourable. This rapid breeding has caused stores to be low, and I have already supplied three good cakes of candy.

Anent the home-made feeder mentioned by your correspondent, "Bumble" (6245, page 108), I always invert a jam jar on to top of frames — but first get a piece of wood 6 in. sqare by $\frac{3}{4}$ in. thick, with a 4-in. hole in centre; nail a piece of perforated zinc on the under side, and place this above feed-hole in quilts. The glass jar is then inverted on to this. To facilitate refilling, instead of tying the cloth with string, I use an elastic band. No bees can escape if perforated zinc is used.

Nucleus Hives.—To make frames interchangeable with standard frames I adopt the following plan:—Two frames are made which, side by side, just fit into a standard. When being used in nucleus (which, of course, is made to suit these small frames) a 1 9-20 in. lug is screwed on to top corner of them to act as bearers. By keeping a few standard frames fitted with nucleus frames in brood-nest of ordinary hive one can always transfer brood to nucleus if necessary, and again if nucleus is done with, the frames belonging to same can be easily put into standard hive.

Bees and Water.—A day of two ago, the sun, getting out after a sharp hailstorm, the bees simply teemed out of my hives for water. The lawn, footpaths, and beds were so thickly covered that one could not walk without stepping on them. In about twenty minutes they had all returned home. Do you think the rattling of the hailstones on the hive roofs had anything to do with bringing them out? I have never noticed them turn out to drink in such numbers after a rain shower. I send name for reference, and sign—"CARBON," Co. Durham, March 19.

[We do not think that sound alone would cause the turn-out noticed. It is much more likely that the warm sunshine and need for water caused it.—EDS.]

AMERICAN AND COLONIAL PAPERS.

EXTRACTS AND COMMENTS.

By D. M. MACDONALD, Banff.

The Wintering Problem.—We in our short-sightedness and limited intelligence too oft speak as if only in colder climes did this subject obtrude itself on the notice of bee-keepers. However, we find that even in sunny Jamaica it manifests itself. Mr. Arthur Laing says that from the middle of October, for two or three months, the bees kept going down. There seemed to be just enough honey coming in to make them wear themselves out by flying after it, so that his average yield was only 25lb. per colony.

Mr. Louis H. Scholl says of Texas: "It may be thought that such a thing as wintering bees in the South does not exist. Yet we *winter* our bees." He advises such things as boards, straw, corn-stalks, sorghum, old quilts, sacks, and roofing-paper being used to protect hives during winter, while he considers it necessary to locate an apiary where it will be sheltered by a wood, hill, fence, or hedge. Cold snaps, it seems, come on, and do sad havoc by chilling the brood and causing loss of dollars. Many bee-keepers lost heavily last winter. In Australia, too, matters are at times very trying. Queens may keep on breeding all winter, yet in spring—to give one example from a prize essay in the *Australasian Bee-keeper*, they may cease ovipositing altogether. "When swarms ought to be coming off I have still to be feeding, and the worst feature is that those hives that were in the best condition earlier have suffered the most." One lost fifteen colonies out of thirty-three, and another thirteen out of seventy. The editor reports only four colonies left out of forty, and news of heavy losses comes from afar and near. These three cases of sunny climes show that the wintering problem is very real even where there is no true winter.

The following from *Gleanings* is worth extracting as showing the honey gathered by colonies in the north contrasted with the south—*i.e.*, in cold and warm climes:—"With the abundance of honey-yielding flora, and the long, warm seasons in the south, it would seem that a colony of bees must store an increased amount of surplus over a similar colony in a northern locality with shorter seasons. This is not necessarily so, however. The colony with southern conditions no doubt gathers more honey during the season, but at the same time it consumes more. Not only is more consumed by the bees themselves, but a much greater number is reared. A colony in the north, therefore, may not *gather* nearly so much honey in a season, yet the surplus of both may be the same."

Italians.—Mr. C. P. Dadant has the following to say of this well-known bee in A.B.J.:—"There has been too much in breeding for colour, and in many cases the original qualities have been neglected in order that the bee might show the very brightest tint of yellow rings and a dis-

play of bright colour to the abdomen. The Italian, in its native country, shows three yellow rings, which vary from a bright orange-yellow to a dull leather-colour. Occasionally a few bees are found that do not display the third ring until the bee is full of honey. But the most positive sign of purity is their adherence to the combs when properly handled." Believing in Italians, as he does, he can also see some good in the blacks: "They can at times work on red clover, and some hold that they can produce as much honey." The Italian race is more saving, he considers, and stores up for winter when the blacks will be destitute. Here the case is diametrically opposed to this statement. Locality again? Balaam-like, Mr. Harry Lathrop set out to curse the blacks, and ended in blessing them, for his finding is: "By *proper care* the black race might be made equal to any for honey-gathering qualities."

Over-concentration.—This is being over-advocated in some quarters, I fear, at present. Mr. E. D. Townsend, at the Chicago Conference, advised the contrary. He counselled "the scattering of out-apiaries so as not to be dependent on a single source of honey. Let one apiary be in a clover region, another in the raspberry area, and another where a crop might be expected from buckwheat, etc. By this management a man is almost certain of a crop from at least one source every year." As Mr. Townsend sold over £350 worth of honey last year, he should know of what he speaks. Mr. Alexander's location must be a veritable bee-keeper's paradise. His advice to increase 100 colonies to 300, and still expect a good surplus take, was such that I felt I could not put it before our readers. A writer in the C.B.J., however, hits the matter off so well that I quote: "How many localities are there that would allow even a strong colony to be trebled previous to the honey-flow and yet yield any considerable surplus? It must be borne in mind that his location is one in a thousand." The editor endorses this, and says: "It would be misleading and disastrous to the great majority of less fortunate bee-keepers should they attempt to follow his system under altogether different conditions." In our country I know of very few sites where I would care to plant down 100 colonies, much less 1,000, and expect them to pay working expenses.

Queries and Replies.

[3242.] *Bee-keeping in Bedfordshire.*—Will you kindly tell me through the B.B.J. if you know of anyone who keeps bees on the modern plan near Oakley, Beds? Also, is there any place in the county of Bedfordshire where classes are held or lectures given on the subject of bee-keeping? I am about to make a start with bees, and would like to learn all I can before commencing, as I think that by so doing I would probably save many blunders.—G. R. W., Oakley, Beds.

REPLY.—There is a bee-keepers' association in the county, Mr. C. N. White, Master, Union House, St. Neots, being the hon. sec. Regular lectures on bees are also given in various centres under the auspices of the Bedfordshire County Council. Mr. W. Herrod, Bedford Old Road, Luton, Beds., is the County Council lecturer, and would no doubt give all particulars if applied to.

[3243.] *Mouldy Pollen in Combs.*—I shall be obliged if you will tell me if any harm will be done by putting combs into a hive containing pollen which has gone mouldy, and, if so, the best way to clean them? I am a reader of the BEE JOURNAL, but have so far never seen anything mentioned on that subject. — H. E. B., Kettering, March 20.

REPLY.—If only a few cells are in the condition stated the cleaning out of the mouldy pollen may be left to the bees, but if combs are in the condition known as "pollen-clogged"—*i.e.*, full of old pollen—they are useless either for breeding or storage, and should be got rid of.

Notices to Correspondents & Inquirers

Letters or queries asking for addresses of manufacturers or correspondents, or where appliances can be purchased, or replies giving such information, can only be inserted as advertisements. The space devoted to letters, queries, and replies is meant for the general good of bee-keepers, and not for advertisements. We wish our correspondents to bear in mind that, as it is necessary for us to go to press in advance of the date of issue, queries cannot always be replied to in the issue immediately following the receipt of their communications.

F. H. (Uttoxeter).—"Experiences in showing Honey."—Before publishing your letter headed as above, reflecting on the management of an important show, we took our usual precaution in matters of this kind by investigating the other side of the case, and judging by the documentary evidence, there has certainly been no want of consideration towards yourself. In fact, the managers of the show have, we think, been very liberal in allowing you more than half the value of the missing exhibit, and if their suggestion that the railway company do the same be adopted, there will be no cause for complaint. The considerable amount of correspondence you mention makes it clear that your alleged grievance has been considerately and fully dealt with. To sum the matter up, we may say that no show committee, or no

railway company in the kingdom, will admit liability for the safety of exhibits at shows—or damage to same in transit—unless it can be proved that due and proper care has not been exercised in dealing with them.

C. WELLS (Market Harboro'). — Using Naphthol Beta in Bee-food.—1. We do not know what directions for use you refer to, which says: "To each small packet 28 lb. syrup," nor are we in any way responsible for the quality and consequent efficacy—or otherwise—of any N. Beta other than that sent out from the B.B.J. and *Record* office. 2. Full directions for use are printed on each packet (which contain one ounce), together with instructions for making the solution for medicating bee-food; nor is there any vagueness with regard to its being weight of sugar or of "syrup" that is meant. Bearing this in mind, the importance of quantity as well as the quality of drugs used in preparing remedies for disease should make users careful that they are supplied with the right ingredients. 3. Your former letter must have miscarried.

F. W. D. (Woodford).—Dealing with Suspected Stocks.—It is always more satisfactory to have a sample of comb from suspected hives before giving any definite opinion regarding them; but, judging from the clear description sent of symptoms, we should say it was a bad case of foul brood. This being so, your best course is to destroy the bees at once and close up the hive till a chance comes of burning the lot. It is now a constant source of danger to the healthy and prospering colonies you have on hand.

J. S. (Easton, Bristol).—Suggested improvements in Standard Frames.—Your specimen frames were submitted, along with others, at the meeting on Thursday last, and will be reserved for inspection by the committee appointed to deal with the subject. We shall be glad to receive sample of improved bee-feeder when ready.

J. T. R. (Eastbourne).—Bees and Blue Flowers.—We cannot add anything to what appears in our issue of March 1. And as no reader has taken the matter up, it would seem that the general interest in the subject is very limited among practical bee-keepers in this country.

A. E. A. (Stratford-on-Avon).—Syrup for Spring Feeding.—As will be seen in the recipe used (No. 5, page 167), syrup food for use in spring contains more water than that given to bees in summer; consequently it is more liable to ferment through long keeping than the latter. But any left over this spring may be boiled up with your next autumn food. No need to apologise for "asking simple question," nor is yours a "childish" one. We are always pleased to help beginners when we can.

E. M. M. (St. Asaph).—Candy Making.—You must have failed somewhere in carrying out the instructions given in Guide Book, as we have had excellent samples made by readers from the same recipe. Your sample is as hard as stone, and of no use as bee food at this season. Try Br. Colomban's recipe in B.J. of September 14, 1905.

POTSY (Weymouth).—Bee Enemies in Hives.—We frankly confess that the foul smelling mass of wax moth larvae an inch or so long, together with an unusual quantity of such insects and vermin as generate in and feed upon decaying animal matter, was more than we could stand—so far as regards making a close inspection of box and contents. There was no plainly visible sign of foul brood, but the rotting mass was got out of sight and burnt without delay. No doubt the owner of hive had some good reason for the neglect shown, as no stock of bees could possibly have got into the condition in which it was found if the hive had been properly prepared for wintering at close of last season. It will be a troublesome task to clean out the hive and make it sweet and wholesome as a habitation for bees in the coming season.

BEE CANDY (West Bromwich). — Your candy is too hard for general use. It might be carried down while freshly made and soft, but it is now nearly hard as stone. We should like to know what recipe was followed and the quality of ingredients used in making.

A SUBSCRIBER (Suffolk). — Transferring Bees from Skeps.—The plan you propose to follow — *i.e.*, allowing the bees to transfer themselves—is the simplest and best method we know of. 2. The proper time to operate.

Suspected Combs.

D. J. (Wolverhampton).—We have no hesitation in saying that the hive from which sample of comb was taken is badly affected with foul brood of old standing. Save in a very few cells all trace of brood has dried up and disappeared, but the capping alone would point to disease of virulent type, and this is verified by close examination.

ANXIOUS (Berks).—There is no disease in comb, nothing worse being found than hard, mouldy pollen.

*** ***Some Letters, Queries and Replies, &c., are unavoidably held over till next week.***

Editorial, Notices, &c.

BRITISH BEE-KEEPERS' ASSOCIATION

(Continued from page 121.)

CONVERSAZIONE.

At 5.30 the following ladies and gentlemen reassembled, when, after light refreshments had been served, the proceedings commenced:—

Thos. Wm. Cowan, H. J. O. Walker, R. T. Andrews, A. G. Pugh, K. M. Hall (Miss), L. Belsham, A. W. Salmon, J. Holdom, C. Dunham-Massey (Miss), G. H. Sander, J. C. Mason, S. Hill, G. M. Hallowes (Miss), N. P. Bouverie (Miss), Fred. H. White, A. D. Matthews, Chas. T. Overton, C. A. Overton, Wm. Herrod, A. M. Goldsworthy, W. Ward, L. L. Goffin, William Sole, T. I. Weston, W. Broughton Carr, Walter F. Reid, Richard Brown, Thomas Bevan, J. Willard, Cyril Dunn-Gardner, R. Lee, G. Newman, Geo. Dow, A. E. Paul, J. C. Mason (Mrs.), Wm. Boxwell, R. J. Stephenson (Miss), F. J. Bernau, F. J. Osborne Smith, E. E. Ford (Mrs.), C. H. Rose, Percy Kemp, J. Roper, W. J. Goldsworthy, G. S. Faunch, Herbert F. Jolly, Ernest E. Walker.

Upon the motion of Colonel Walker (seconded by Mr. Reid) Mr. Cowan took the chair, and immediately announced that the President (the Baroness Burdett-Coutts), who was unfortunately not able to favour them with her presence that day, had expressed a wish to do something to encourage bee-keeping among cottagers dwelling in villages or in places suitable for the pursuit. In furtherance of this desire her ladyship had agreed to present a modern bee-hive to be competed for by *bona fide* cottagers—who are members of a county B.K.A. affiliated to the parent body—at any show that the county association may select during the present year. It was very kind of her ladyship thus to consider the cottagers, and it ought to encourage them in the pursuit of bee-keeping. He was sure all good friends of the cause would feel much indebted to the Baroness.

The first item on the agenda was a paper by Mr. F. W. L. Sladen, F.E.S., entitled "The Italian Bee, and Breeding Bees by Selection for the Improvement of the Honey-producing Character in Great Britain." Unfortunately Mr. Sladen was not well enough to attend the meeting, but the Secretary (Mr. Young) had undertaken to read the paper in his place, and he (the Chairman) would at once call upon him to do so.

The Secretary then read Mr. Sladen's paper as follows:—

Many bee-keepers are in doubt as to the merits and faults of the Italian bee in Britain. The prolificness, beauty, and good temper of the Italian bee are undisputed; but conflicting opinions as to its honey-producing value appear in our journals from time to time. The difference of opinion is partly due to the fact that some writers do not clearly distinguish between the pure Italian bee and the crossbreds between the Italian and English bee.

Pure Italian bees are only to be found in Britain in a colony which is headed by a pure imported fertile Italian queen, or in one headed by one of her daughters who happens to have been fertilised by a pure Italian drone. Instances of such fertilisation seldom occur in England, except in an apiary where pure Italian drones have been specially reared in large numbers. The amount of yellow colouring is an unreliable guide to the purity of Italians. Many bees that are as yellow as—or it may be even yellower than—pure Italians have not more than about half their parentage pure Italian. Therefore, unless it is known that a colony of "Italian bees" is headed by a pure imported Italian queen, the bees are most likely crossbreds.

The average yield of surplus honey from colonies of pure Italian bees is, in my apiary, not quite so much as that from colonies of English bees, the difference being greatest in cool and windy weather in spring; but the average yield from colonies of the crossbreds is considerably greater than that from colonies of English bees.

The fact that the average honey-yield from colonies of crossbreds is greater than that from colonies of the English bee makes the Italian bee very valuable for honey-production in Britain. Were the pure Italian, and not the crossbred, a greater honey-producer than the English bee, paradoxical though it may seem, a pure Italian queen would not be so valuable for honey-production in Britain as she is, because the bee-keeper repays himself for her cost less from the honey produced during her lifetime by the single colony headed by her than from the honey produced by the many colonies headed by her daughters and granddaughters, and these colonies, as we have noticed, consist of crossbreds.

In an ordinary honey-producing apiary the daughters of a pure imported Italian queen, being fertilised by English drones, will produce workers and queens that are half Italian and half English. The majority of the granddaughters, being also fertilised by English drones, will produce workers and queens that are one-quarter Italian and three-quarters English, although a few may be fertilised by Italian and crossbred drones. Thus the Italian element grows less and the English more in each succeeding generation taken as a whole,

until after many generations the bees will be English bees with only a trace of the Italian blood.

Still more of the difference of opinion about the honey-producing value of the Italian bee in Britain is attributable to the fact that there is much wider variation in the amount of honey produced by *individual* colonies of crossbreds than there is in that produced by individual colonies of the English bee, especially in the second and later generations. Some colonies of crossbreds produce much more honey than average English colonies, others produce the same quantity as pure Italian colonies.

In my work of breeding for the improvement of the honey-producing character in England I have always employed crossbreds between the Italian and the English bee in preference to the English bee, largely because I have felt that the greater average amount of honey produced by colonies of the crossbreds, together with the wider variation in the amount produced by individual colonies of the crossbreds, makes the crossbreds much better subjects for such work. Unless a character varies no improvement can be effected in it. Variation may be regarded as the material and breeding by selection the workmanship by which man has effected, and is effecting, his great improvements in the utility of domesticated animals and cultivated plants. Numerous valuable breeds and strains have been obtained through crossing, followed by strict and continuous breeding by selection.

Another point that makes me prefer crossbreds to English bees is that they are very vigorous and less susceptible to foul brood.

There is still another reason why I prefer Italian-English crossbreds to the English bee. In one sense, this is the most important of all. It is that strict breeding by selection is practicable with crossbreds, while with English bees it is not. In my book, "Queen-rearing in England," it is explained how by rearing a very large number of drones of selected honey-producing parentage, and scarcely any others every season, and by arranging that most fertilisations take place late in the season after the majority of drones belonging to neighbouring apiaries have died, a large proportion of the queens reared in my apiary are fertilised by the drones of selected honey-producing parentage.

I know of only one way by which queens that have been fertilised by drones of selected parentage can be quickly and surely distinguished from those that have been fertilised by ordinary drones, and that is to have the selected parentage so much yellower than ordinary parentage (which is black, or nearly black) that the workers produced by the queens fertilised by drones of the selected parentage will be yellower than those produced by the queens fertilised by drones of ordinary parentage. For continuous breeding by selection it is necessary that both queens and drones be bred from the yellower parentage.

During the last few years I have been breeding crossbreds between the English bee and the Golden Italian, or Extra Golden * bee, a variety of the Italian bee which has been developed lately in America, and which has much more yellow on the abdomen than the pure Italian bee, and I find that the bees of the best honey-producing colonies of these crossbreds are frequently as yellow as the pure Golden Italian bee. Last season three-quarters of the bees in the colony that produced most honey in June, in comparison with many colonies of crossbreds and English bees, were as yellow as Extra Golden bees. I am wintering forty-five daughters of the queen of this colony, each of these daughters producing workers of which the majority are as yellow as pure Golden Italian or Extra Golden bees, for testing during the coming season.

It frequently happens that a small proportion of queens reared from a best honey-producing yellow parentage are dark. These dark queens are not introduced to the nuclei, and this helps to maintain the yellow colour of the strain.

I believe that an improvement which it would take a lifetime to effect in English bees could be accomplished in crossbreds in comparatively few years.

Testing colonies for the improvement of the honey-producing character in Britain must be done in the peculiarly cloudy, windy, and cool, spring and summer climate of Britain, or in a similar climate. There is thus a great future before bee-breeding in England, and its prospects were never so bright as they are at present.

Colonel Walker said that if Mr. Sladen had been present he would have been glad to ask him to what origin he attributed the "golden bees" referred to in his paper? It was stated that a great number which were sold as "golden" were not Italians. It would be interesting to know what they were. He would like to thank Mr. Sladen for the able way in which he had put all he had to say before bee-keepers, either in lectures or in the columns of the B.B.J. That gentleman's experiments and reflections were always thoughtful and interesting.

Mr. Overton was much interested in the paper, being himself a breeder, a rearer,

* The name "Extra Golden" is given to the yellowest examples of this variety. The majority of Golden Italian queens bred in America do not produce the yellowest bees.

and an importer of Italian queens. He maintained that the Italian bee stood far above the average of our natives. It had great qualities as a honey-producing bee, but, unfortunately, there was some prejudice against it. It was credited with bringing disease into the country, but he had never found that disease was introduced in that way. The introduction of an Italian queen to a degenerating stock gave extra energy, and was a good means of keeping disease in check and also of making in every way a better colony. In their pure state Italians were very gentle indeed, if handled in a proper way. Besides, they were beautiful to look at, and a source of new and increased interest and profit to those who had been in the habit of keeping English bees. The first cross between Italians and blacks produced the best results, and the breed was not quite so vicious as after crossings were. The former were easily managed. As regarded results, he thought more interest ought to be taken in them. Those who had experience in rearing queens knew the importance of careful selection from prolific mothers. He hoped bee-keepers would give more attention to queen-rearing, and especially to the Italians.

Mr. Bevan had tried one or two of Mr. Sladen's queens, and had every reason to be satisfied with them. They would always hold their own against English ones, and if the latter hives were not very strong they would soon be cleared out by the foreigners. It was not, he thought, practicable to keep all sorts of bees in the same apiary. He had done well with the first two Italian queens, and had had as much as a hundredweight of honey in one hive collected during June and July. He thought that a good yield for an apiary located so near London as his was.

Mr. W. Herrod was against the introduction of aliens of any description, whether bees or human beings. (Laughter.) Something had been said of the good qualities of Italian bees; in fact, all their qualities were said to be good. His experience entirely differed from that of Mr. Overton. In the first place, the pure Italian bee did not winter well in this country. He had proved that over and over again, and Mr. Sladen admitted it was not so robust as the native bee. He (the speaker) granted that the first cross was very good, so far as honey-producing was concerned; but they were also good producers of severe trouble with their stings! If these hybrids were to be recommended as a bee suitable for novices, he thought the latter would soon give up bee-keeping in disgust. Pure Italians were also more susceptible to disease than natives. Wherever he had been, North, South, or Midlands, if a case of disease occurred he had generally found it in the "foreign" hive. The late John Howard, who spent large sums on foreign bees, was finally of opinion that all things considered, no variety could beat the English bee. No doubt the introduction of new blood would keep up the strength of colonies, but that could be obtained without going abroad.

Miss K. M. Hall and her sister-in-law started an apiary in April, 1904, with two of Mr. Sladen's stocks, on top of the Hindhead, since which time the bees had increased to eleven stocks — all Italians. They had crossed with other bees in the neighbourhood, but the first cross was too bad tempered for her partner to touch at all! In the first year over 90lb. of honey was secured; last year the yield was close on 400lb. These stocks were very strong, and had never needed candy food. They were on the summit of the Hindhead, where probably the coldest blasts in England blew, and yet they wintered well. She therefore could not agree with Mr. Herrod's views, and his experience was different from hers. As time went on and they increased, she found the bees grow quieter and were far less troublesome now than at first.

Mr. Herrod remarked that it seemed clear that the longer the lady's bees stayed the more English did they become.

Mr. Salmon started bee-keeping with a first-cross of Ligurian with English, and found they swarmed many times more than the English bee did. He noticed that when the Ligurian blood predominated he had more honey than when the gathering was the work of pure English bees. Possibly, however, the seasons may have accounted for that, but he thought not. He knew that the prevalence of foul brood was attributed to the Italians, but his experience did not confirm that.

Mr. Dunn-Gardner handed in to the Chairman a tabular statement showing that out of 73 hives he possessed, the highest yield of honey produced in any one was 176lb. Some of the other results from single hives were 174lb., 137lb., 133lb., 128lb., etc., etc. The average for swarms and swarmed hives was 36lb. 13oz., while the average for the whole lot was 72lb. The whole of the honey weighed came entirely out of the supers, and was produced by hybrid bees.

Mr. Richard Brown could verify Mr. Dunn-Gardner's statement. He had never seen a better-managed apiary, nor a better class of honey, than on the occasion of his visit there a month or five weeks ago. With regard to Ligurians, or half-breeds, he agreed they are more prolific than other species. He did not at all like their sections of comb-honey, but for extracted honey they were "all right." The face of the comb worked by them was serrated, and did not look at all nice.

Mr. Weston thought that the speakers were missing the mark by introducing a sort of competition between rival races of bees. Those who wished to select and improve their strain of bees would do well to think over those passages in Mr. Sladen's paper in which he explained how he caused his queens to be fertilised by certain drones. As to the question, "Which are the best bees to keep?" the late John Howard told him that he had given a thorough trial to both kinds, but, judging that he could not manage both in one apiary, he decided to give up the Italians.

Mr. Pugh had been making notes as the different speakers gave their opinions of Italian bees. One gentleman said they were thieves, and stole everything; another, that their stinging propensities were too marked; another, that they could not be kept in the same apiary with English bees; another, that they were no good for comb-honey; while a lady and gentleman hinted that they were everything a bee-keeper could wish for. He felt fairly bewildered with the diversity of opinions.

Mr. Reid said that one of the objects of the B.B.K.A. was to investigate these matters. It would be a good thing, as they had an experimental apiary, to test the value of Italians, and obtain an independent opinion, especially as the evidence was so conflicting that it was difficult to form a proper judgment. He thought there ought to be a kind of medical inspection of queens that came into this country—that was a medical examination of six-footed aliens. (Laughter.) He had known foul brood break out in apiaries where directly-imported Italian queens had been introduced. It was little good to fight the disease while a precaution like that was neglected.

Mr. Willard thought that the success of an apiary depended in great measure on the importation of fresh blood into it from time to time.

(*Report continued next week.*)

LINCOLNSHIRE B.K.A.

The annual meeting of this association was held in the Co-operative Hall, Spalding, on Saturday, March 24, and was well attended by members from many parts of the country. H. Stanley Maples, Esq., Spalding, presided, and moved the adoption of the report and balance-sheet, which latter showed a small balance in the hands of the treasurer. Mr. E. Waite, Boston, seconded the motion, which was carried unanimously. Votes of thanks were accorded to the officers of the association for their services during the past year, and their re-election was proceeded with. The Right Hon. Lord Heneage was re-elected President, and all the other retiring officers were re-elected. Mr. F. J. Cribb, of Retford, gave a most interesting lecture on the "Natural History of the Honey Bee, and the Fertilisation of Flowers by the Bee," illustrated by lantern slides. There was also a "drawing" for useful bee-appliances. It was decided to hold the annual meeting in 1907 at Lincoln. (*Communicated.*)

WARWICKSHIRE B.K.A.

ANNUAL MEETING.

The members of the above association held their twenty-sixth annual meeting on March 23, at the Grand Hotel, Birmingham. There was an average attendance, including many ladies, and the Rev. W. C. R. Bedford (vicar of Sutton Coldfield) occupied the chair. The annual report was considered satisfactory, the accounts showing a balance in hand of £22 3s. 3d. The association's experts visited 420 apiaries, and inspected 2,000 stocks of bees during the season. Bee-keeping is undoubtedly on the increase locally, and with something like 500 members on its books this association affords those interested every assistance in furtherance of an instructive and profitable hobby. Sir P. Albert Muntz, M.P., was elected president, and the vice-presidents were re-elected, while Dr. T. Savage, Rev. W. C. R. Bedford, and Rev. G. Sedgwick were added to their number. Mr. J. Noble Bower (hon. secretary), Mr. J. R. Ingerthorp (assistant secretary), Mr. G. Franklin (expert), and Mr. Edward Franklin (assistant expert) were also reappointed. After the business proceedings an interesting lecture was delivered by Mr. G. Franklin on "Honey-producing Plants, and the Relation of the Honey Bee to Flowering Plants in the Production of Seed and Fruit."—(*Communicated.*)

BEES IN JAPAN.

LETTER FROM MR. T. B. BLOW.

The following letter will be read with interest by readers of the older school, who will no doubt cherish personal memories of the days when Mr. Blow was one of the most prominent appliance dealers and expert bee-keepers in this country:—

Kyoto, Japan, February 12, 1906.

DEAR MR. CARR,—Though you often come into my mind, yet at this juncture I am especially reminded of you by having the pleasure of eating daily the wonderful first prize samples of honey that you so kindly furnished my good friend Sinclair with to send me. You will wonder why, in this distant land, often called the Land of Flowers, that I send for English honey, and why I do not

raise my own here. Once a bee-keeper always a bee-keeper may be taken as an axiom, and though, as you know, I spent many years of busy life in England engaged in the work of advocating bee culture, and at the same time running an extensive supply business, yet though I gave this up, no sooner did I settle down in this, my adopted country, than the bee-fever was soon on me, and I determined again to keep bees. They are not plentiful in Japan (despite the statistics of the Agricultural Department schedule, the supposed number of hives, which is I should think, greatly over-estimated). Honey is not used in Japan for food but as medicine. The bees are kept in square boxes of about one cubic foot contents, and cubic in shape. There is a door at back, and the comb honey is cut out whenever available, and is crushed (along with the brood often), and strained, and in this state sold. Very little wax is obtained, for though wax is used extensively in this country for various purposes, it is vegetable wax mainly.

After deciding to make a start, I went to work, and getting some foundation, sections, and pattern frames sent out to me from Welwyn, I set my house carpenter here to make a hive. Though he had never done such a job before, yet he turned one out with every space accurate to perfection, and though hand-made, it cost just about what a decent hive would do in England. Then the foundation was put in, and the hive placed on a bench at the top of my hill-garden. A box of bees were bought for 6 yen (12s.) from a bee-keeper located a few miles away, and before long they sent out a swarm which was put into the new frame hive. And now the troubles began.

The Japanese bees are smaller than the European, and they very reluctantly took to the comb foundation; undoubtedly the cells were too large for them to deal with well. Seeing the multitudes of flowers around, one would have expected an amazing yield of honey; for instance, in April and May, one may travel for hundreds of miles and see one blaze of yellow from the mustard and rape flowers (the oil-producing plant), but beyond this there is nothing. Later on the whole country is under rice, which, of course, is useless. But the bees themselves are lazy—there is some food to be got almost all the year round (for we have no cold, wet winter like that of England), and the bees certainly do not store much honey, and so, after two years' experience, I concluded that it is cheaper to buy honey than to raise it, and in quality our English honey is vastly superior; so though my bees are still alive and well, I allow them the use of all they gather, or nearly all. They have many enemies, too.

The wax moth is a great pest here, and the stocks are speedily reduced to ruin unless great and frequent precautions are taken. Then the dragon flies are terrible. In Japan these exist in great numbers, and many species, some of them very large. These dragon flies follow the bees like hawks, and carry off their victims for consumption. Then the hornets swoop down on the alighting board and take toll of the workers. In late autumn, just before the queen hornets hybernate, I have stood by my hives with a little bat of flat wood, and have frequently killed twenty in five minutes. They are very large, and fly slowly, and are easily knocked down. They find the bees most suitable food to fatten upon before returning to winter quarters. I am hoping to come to England this year for about six months, and shall give you a call. Now, with kindest regards to both yourself and Mr. Cowan, in which my wife joins (she is a good bee-keeper now),—Believe me, yours faithfully, T. B. Blow.

Correspondence.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

**** In order to facilitate reference, Correspondents, when speaking of any letter or query previously inserted, will oblige by mentioning the number of the letter as well as the page on which it appears.*

AMONG THE BEES.

FOREWARNED IS FOREARMED.

[6264.] I lately read in an agricultural journal that a bee-keeper in a large way lost fifty colonies of bees through "lack of attention." I mention this to point a moral. Remember, each of these colonies are worth about one pound in spring; they may be worth two by swarming, and the honey gathered may be worth—putting it modestly—another sovereign. So here, by the want of a little care given at the proper time, with an outlay of perhaps but a few pence, the owner loses, at a moderate computation, the equivalent of £3 sterling. You who pack up your stocks in late autumn, or it may be early winter, with an insufficiency of stores, are now warned that you have committed a crime, and that if you are not ready with your solid cake of candy on the first fine day you are about to repeat it knowingly and willingly. Two to six pounds of this may cost one to three shillings, but remember it may put as many pounds in your pocket if the coming season is propitious.

Then, have you examined every roof of every hive to certify that it is wind and

water-proof? If not, do not lose a day or an hour until you see to it. During winter, with a heavy snowfall covering the hives to the depth of several inches, they are safe—doubly safe—for the snow acts as a warm blanket and conserves the internal heat. Now, however, when it is likely to melt, and when the dry snow turns into slushy sleet, every small crack and crevice proves a veritable death trap. Sleet or rain percolates inwards in a most insidious way, saturates the coverings and chills the interior to such an extent that the joys of the brood-cluster turn to misery and sorrow. Much of it ends in death and destruction to the stock. Avoid it all. Make sure "sicar" by covering every faulty hive-roof with a sheet of hard felt, or, better, a rain and damp-resisting cover of thin sheet zinc, against which the fiercest blasts and soakiest showers may beat in vain, for it is proof against the powers of either.

Have you made certain that your hives are rich in that best packing for bees—*more bees?* If not, unite at the first opportunity. Are you positive that you had a queen heading every stock when you winter packed? If not, again I say, unite. Have you certified that each colony has even a superabundance of dry warm wraps? If not, supply them. If there is any dampness, or "mochiness," substitute others. Stocks may subsist, if in good heart otherwise, through even a severe winter with very little packing; but when spring arrives and the close cluster breaks up to a loose mass, the case is different. Then a large amount of overhead wrapping is an utter necessity, if the colony is to prosper. Active breeding sets in at an early date. This necessitates greater heat if the brood is to prosper. Therefore, even add to overhead coverings to conserve this heat, and aid the bees in securing that early hatching which better than anything else secures the future well being of that colony.

Have you, at an early date, ordered your future necessaries in the way of bee-goods? If not, do it now, or soon, before the appliance dealers are rushed by the number of orders received in the height of the season. By doing so you get better attention, generally better goods, and these goods at a better and cheaper rate. The hive should always wait the swarm, not the swarm the hive. Sections also should be on hand early, to make certain that they are ready before the flow comes on. A number of racks should be got ready in anticipation of any flow which comes on. Some days too early may be better than one day too late, because once the thoughts of swarming enter into the wise little heads of those teeming thousands inhabiting the hive, nothing but carrying out the whole process will, as a rule, satisfy them. Order swarms and queens in good time. Do it *months* before you require them, where you have not a regular standing order. Then you can have some claim for early attention, as generally it is "first come, first served."

I know time is precious with many, and that with most readers—myself amongst the number—bee-keeping is a side issue, a mere interlude in an otherwise busy life. It is not with us as if it were simply a case of bread and butter. But it is for this very reason that such reiteration as my present contribution contains is necessary. If it were a pure business matter, it would receive more attention as a matter of course. I know that yearly, with too many, spring passes without bees receiving that slight care necessary to success. Before enthusiasm breaks out into full fruition the critical time has gone, and the bees, too, have gone beyond the benefit of the care ready to be showered on them. With too many apiaries this enthusiasm comes in fits and starts. At times bees get too much of it; at other times, critical times, they get too little. Now, every reader of these columns has only himself, or herself, to blame if every colony showing signs of life in early spring is not pulled through and converted into a valuable asset. I would lay most stress this spring on special attention to the cupboard. If necessary, replenish it by candy, or later by warm syrup. Handier than either, and more efficient, is the interchange of well-stored combs, if on hand. From the first momentary peep I take I always make a point of scratching some cells of capped honey as near the cluster as possible. This is the only spring stimulation I require, or desire. But, remember, I work mainly for the heather. If I had fruit blooms, or any other early honey source, I might act quite differently. On second thoughts, do! With fully-stored combs on hand, I would use them in preference to any other stimulant. But, and here is the point, I do all my spring feeding *in autumn.* — D. M. M., Banff.

HOME-MADE FEEDERS.

[6265.] Referring to the letter in last week's B.B.J. on home-made feeders (6245, page 108), will you allow me to say I have tried feeders of all kinds? The one described by your correspondent, "Bumble," will work all right as a feeder, but it has the same fault as the wide-mouthed jar —*i.e.*, the running-out of food too fast and thus drowning the bees, or else of keeping the food out of the bees' reach entirely? When syrup-food runs down all over combs, and half-drowning the bees, it often starts "robbing," as we all know,

On the other hand, if the bees cannot get the food at all, as sometimes happens when the jar-mouth is covered with calico, the feeder is useless. My plan is to use a feeder made from a "golden syrup" tin, and it forms a very simple fountain indeed, while it is impossible for the bees to get smeared with or drowned in the syrup. About 100 bees can feed at a time on a very small space without any danger, nor can the bees escape while the filling is done as they can with the "golden syrup" tin. I would not use the most expensive feeder in place of my simple one if the former was offered me as a gift. If any reader would like a model of it I will undertake to forward one for a trifling charge, and this would be better than a description. My bees are all hard at work on the furze just now, and doing well, so I hope a prosperous season is in store for all bee-keepers. — H. H., Burghheath, near Epsom, March 17.

SCOTCH HEATHER HONEY.

IN BARRELS AT LESS THAN 3D. PER LB.

[6266.] In reply to the letter of Messrs. Shaw Brothers (whose letter appears in B.B.J. of March 22), we would like to say that it is quite impossible for any firm to offer genuine Scotch honey at anything like so low a price at 3d. per lb., carriage paid to London. Further, we do not believe they could buy it for that money. In the course of our business we come in contact with a great many bee-keepers on the West Coast of Scotland and the lowest price we have heard of is 6d. per lb. in bulk; 1-lb. screw-cap jars and 1-lb. sections 8s. 6d., 9s., and 10s. per dozen respectively; retail, 9d. to 1s. Then to talk about Scotch heather honey at 3d. in 5-cwt. lots! Na! Na! Sandy's nae sae blate. He knows that he can find a ready market for all he can produce of the real heather at 10s. to 15s. the dozen. Whistlefield should be able to say something in regard to that, as there is nothing but the heather in that part. For ourselves we may say that 1905 was the best honey season we have had for a long time. Bee-keepers who give special attention to their stocks averaged close on 100lb. per hive; some of their best stocks giving over 200lb. The heather was a failure round hereabout. Further inland they did get a surplus. While bee-keeping is making rapid strides forward, and bee-keepers are getting their ranks recruited every year in Scotland, there is not the slightest danger of pure Scotch honey being offered in London at 3d. per lb.—GUTHRIE BROS., Alloway, Ayr, March 27.

[6267.] In reply to the question of your correspondent, D. M. Macdonald (6257, page 123), the firm which has been offering and invoicing "Pure Scotch Heather Honey" in London, in 5cwt. barrels, at under 3d. (threepence) per lb., is Messrs. Ingram Bros. and Co., 34, Robertson Street, Glasgow.—SHAW BROTHERS, 12, Idol Lane, Eastcheap, E.C., April 2.

INDICATOR BEE-HIVE STAND.

[6268.] I came across the following particulars in an old book dated 1859. The idea may not be new to yourselves, but I thought the description of a home-made contrivance by means of which it could be seen what weight of honey was gathered by a colony of bees in a given time might be useful to some present day readers who take an interest in such things, for use in their own gardens.

I also enclose a rough sketch of the illustration which accompanies the description in the book, if it is thought worth while to reproduce it. - APIS, Birmingham.

"Having lately devised a plan by which to increase my own enjoyment of bee-keeping, it has occurred to me that many others who take an interest in the subject may like to follow my example, and I submit herewith a sketch of an 'indicator bee-stand,' constructed with a view of enabling the bee-keeper to note the progress of a colony in honey-gathering all through the season, so as to compare, if needful, the influence of a period of fine weather, say for a week or a few days, in increasing the weight of the hive.

"The indicator is a spiral spring fitted inside a hollow post, and on the spring is a short piece playing freely into the socket, and on this piece the hive-board is placed. A new swarm, hived in a new hive, would form the most interesting subject for a first experiment.

"When placed on the stand the weight of hive, bees, and board, will be indicated on the dial plate by means of the finger which is attached to the spring, and as the process of comb-making, breeding, and honey collecting goes on, the increasing weight, acting on the spring, will at all times indicate the gross weight superincumbent on it. It can be made to register from 60 up to 100lbs. The construction of the stand is most simple. The hollow post is of inch stuff, and the short piece that supports the hive is carefully fitted and smoothed with black lead to make it play freely, and as its range of motion, perpendicularly, is only three inches, the action of the spring, even in taking a heavy super, cannot by any possibility cause a jerk. The spring is japanned to preserve it from the action of the weather; without being so prepared, it would hardly be expected to last through a season.

Anyone enjoying sufficient leisure and handy in the use of tools might make it for a few shillings.

I hope soon to set the stand in action, and anticipate much pleasurable instruction in the daily record of progress which the dial plate will afford me.—SHIRLEY HIBBERD."

TANGING BEES.

[6269.] As a regular reader of the B.B.J. I have been much interested with the letters therein about "tanging" bees, and may be allowed to give you my experience in that line. When a lad of thirteen I was engaged on a warren tending cows, and had the privilege of having my meals in a house near by, where some bees were kept in straw skeps. I well remember that I often saw swarms come out, and when this occurred I always ran to inform the bee-keeper, and on doing this was promptly handed the key out of the door and the dustpan by his wife, and told to go and "tang the bees" till she came to hive them. I, of course, "tanged" away as hard as I could, but was only too pleased when she did come, for the thousands of bees usually got too near me to be pleasant; but I never got a sting, though I used to run about near the bees, beating the dustpan as hard as I could, much to my own boyish delight.—J. R. W., Oakley, Beds, March 16.

MARCH RAINFALL.

Total 2.03 inches.
Heaviest fall, .40 inches on 10th.
Rain fell on sixteen days.

W. HEAD, Brilley, Herefordshire.

Queries and Replies.

[3244.] *An Ideal Colony in March.* — Hardly knowing what is usually called a "strong stock" of bees in March, I should like to ask your opinion of one of my hives, after giving you the following particulars. The stock is headed with a 1904 hybrid queen, and last year she started with six standard frames; at the end of the season, after taking 49lb. of surplus honey (section and extracted), I left on two body-boxes, each containing ten standard frames. They came through winter well, and I found on examining them last week that both boxes were quite full of bees, all the ten frames being covered with them. As this seemed to me an exceptionally strong colony at this early part of the season I could not refrain from asking your opinion of them, through the medium of the B.B.J. 2. Also do you not think the above would be a good stock to raise queens from? I may say two experts have examined the hive, and both declare they are the strongest stock they have ever seen at this time of the year. Trusting you and all who keep bees and love the craft will have a prosperous season.—JOSHUA B. C., Truro, Cornwall, March 31.

REPLY.—1. If, as stated, the bees covered twenty standard frames at end of March, we do not wonder at the experts' statement. We never yet saw a colony that completely filled two body-boxes holding twenty standard frames in March. 2. We should do no more than get a comb full of eggs from the hybrid queen and rear queens from them in another hive. By so doing the stock itself will be free to exercise their working powers in honey storing.

[3245.] *Advice on Bee Management.* — I have had two stocks of bees for five years, but only took over the management of them last autumn, so that while knowing something of bees theoretically, I am quite an amateur with regard to practical work among them. I shall therefore be greatly obliged if you will give me a little advice. After reading Mr. Cowan's "Guide Book,' I gather that it is now about time to commence spring feeding, as advised on page 109. I gave each stock some cakes of soft candy a fortnight ago which is not yet all consumed. I therefore ask:—1. Should I wait till the bees have finished that, or take it away and start giving spring syrup? 2. I have also by me some cakes of candy left over. Will that keep for another season? I had a third stock in a skep given me last autumn, the bees of which have been flying strong and busy gathering pollen. 3. Do you advise me to transfer this stock to a frame-hive about May, or should I wait for it to swarm and then transfer the old stock afterwards, so making two stocks from it? I shall be glad to have reply as soon as possible. I have taken your B.B.J. and the monthly *Record* for some time and derived much useful advice in reading every number since. I send name for reference and sign.—D. E. W., Sussex.

REPLY.—We advise giving syrup in lieu of candy at this season. It is far better for the bees. 2. Any candy left over may be used in making syrup for autumn food, but it will be too hard for use in its present form. 3. The custom of transferring old combs from skeps to frame-hives is now out of date, and has fallen into disuse, much to the advantage of bees and bee-keepers. If, therefore, you decide to let the skep swarm, we should hive the swarm in a frame-hive, and three weeks later drive

the bees from skep, and hive in a new frame-hive.

[3246.] *Some Urgent Queries for Spring.*—1. In uniting two stocks in spring, without removing one queen, is the younger of the two queens usually the winner when the fight comes? I cannot see well enough to pick one out unless I have a very good chance. 2. If the bees of an old stock increase quickly and continuously in spring, is this usually considered a proof that the stock requeened itself in the previous year? 3. I see that hives that have contained stocks affected with foul brood are sometimes painted inside. Does not this painted surface cause condensation from damp air that is of an injurious amount? 4. I have been disinfecting some hives that last year contained stocks very badly diseased. After reading what is stated in the "Guide Book," at the top of page 169, I do not feel very hopeful of escaping disease when I use the boxes again. What are the chances?—B., Lincs, March 28.

REPLY.—It is by no means certain which queen will be the victor when left to "fight it out." This being so, the trouble incurred in selecting the best one to save will be well repaid. 2. By no means; in fact, some queens do better in their second year than in the first. 3. In practice it is found that no appreciable bad effect follows painting the insides of hives. "Hall's washable distemper" makes a capital substitute for ordinary paint for the purpose, and is free from the objections named. 4. If the instructions given in "Guide Book" are carefully followed the danger is minimised very much.

[3247.] *Mildewed Pollen in Store Combs.*—I have had a number of standard brood-frames stowed away for the winter, and now find that those combs in which pollen was stored have become rather mildewed. I have therefore cut out the parts affected and placed them in the sun to dry. Do you think it will be safe to use these frames again, or had I better destroy them? Would spraying with carbolic disinfectant do any good? Your reply will oblige—G. L. P., London, S.W.

REPLY.—There can be no risk in using frames of comb from which nothing worse than mildewed pollen has been cut out. In fact, the bees would themselves have cleared away the mildew when the comb was required for use.

[3248.] *Non-swarming Hives.*—A fortnight ago I purchased a stock of bees in a "Taylor's" non-swarming hive, at a farm sale. The bees had been, it was stated, pronounced healthy by the local expert. On examining my purchase I found that no frames had been placed in the non-swarming chamber, and, in consequence, the bees had built (very crowded) combs from bottom-bars of frames in the brood-chamber above. Hence I was unable to make a proper examination. After managing to get out one frame I noticed on the top of the next one a small brown object (remains enclosed), the size of a small acorn; apparently it had dropped from the frame I had removed, as the excluder was on top before I began. It contained a perfectly clean, thick, creamy-looking substance, free from smell. Unfortunately I threw it away at the moment; hence its present condition. There were in the hive an abundance of bees and stores, and a few drones. To-day (April 2) drones are flying in and out, and the worker bees are carrying in pollen. I therefore ask:—1. Is it possible the broken bits of wax enclosed a queen-cell with larva in a state of development, and that the bees are about to requeen themselves? I mention this because of not seeing the queen in my imperfect examination. 2. While I had a frame of comb in my hands I noticed a bee bustling down the next one, carrying something pearly-white, the size of a small hemp seed. What would this be? I am a beginner at present, with no practical experience. During the winter I have been studying Mr. Cowan's two books. Thanking you in anticipation of reply, I send name and sign—CAMBIST, Stamford, Lincs, April 2.

REPLY.—1. The bits of wax are evidently the remains of a queen-cell, but we see no signs left of the larva mentioned as being "in a state of development." Under the circumstances detailed above, your best course will be to examine the combs in brood-chamber for eggs or larvæ, and, while doing this, keep a look-out for the queen (if there is one). Should there be no sign of brood-raising going on, the stock will be either queenless, or headed by an old queen. 2. The white substance might possibly be the remains of a young larva that had been "chilled" to death, or a bit of wax. We cannot say from a beginner's description what it was with any degree of certainty.

[3249.] *Danger of Accepting Stocks of Bees.*—Will you please tell me, through the B.B.J., if the comb sent is affected with foul brood? I have just had the stock, from which sample was taken, given to me, and should not like my other hives, which are now healthy, to become diseased, if I can help it. I am only a beginner, and never having seen foul brood, I should be much obliged for your opinion and help. I find the B.B.J. and "Guide Book" very useful.—A. L. W., Wolverhampton, March 27.

REPLY.—The comb sent is affected with foul brood of old standing; therefore, your best course will be to destroy the bees and

combs at the earliest opportunity, by sulphuring the bees and burning combs and frames. If the hive is not a good one we should burn that too. It is of the utmost importance that there should be no delay in operating, because if your healthy bees start robbing the newcomers it may see the ruin of your whole apiary.

Notices to Correspondents & Inquirers.

Letters or queries asking for addresses of manufacturers or correspondents, or where appliances can be purchased, or replies giving such information, can only be inserted as advertisements. The space devoted to letters, queries, and replies is meant for the general good of bee-keepers, and not for advertisements. We wish our correspondents to bear in mind that, as it is necessary for us to go to press in advance of the date of issue, queries cannot always be replied to in the issue immediately following the receipt of their communications.

*** ERRATA.—Referring to the letter headed "Suggested Conference" (page 127), Mr. R. H. Coltman writes to say that in the ninth line from end—the letters B.B.K.A. should have been D.B.K.A., as applying to the Derbyshire Bee-keepers' Association, not the B.B.K.A.

P. B. R. (Somerset). — Joining a County B.K.A. — Somersetshire will no doubt very soon have its own county B.K.A., as steps are now being taken to re-establish the late Bristol, Glos. and Som. B.K.A. as a county B.K.A. for Somerset. We hope to have full particulars for publication when matters have taken definite shape. 2. The sample of comb sent is affected with foul brood of old standing.

W. T. (Stratford-on-Avon). — Broodless Hives in March.—1. There must be something wrong about your bees to have no brood in any of the hives at this season. Good well-cared-for stocks should now have brood in all stages in several combs at end of March. 2. The very small bit of comb sent contains foul brood of old standing.

BELGRAVIA (Leicester). — Dealing with Combs from Diseased Hives.—You did well to destroy the bees, as there is foul brood in each of the two sealed cells forwarded. If, however, the combs are—as stated—good new ones, they will be safe to use if syringed well with soluble phenyle.

NOVICE (Devon). — Making Bee Candy. — Except for being not quite smooth in grain, your sample made from Br. Colomban's recipe—is very good for a first trial. No doubt you will overcome this slight defect next time.

*** *Some Letters, Queries and Replies, &c., are unavoidably held over till next week.*

Special Prepaid Advertisements.

Twelve words and under, Sixpence; for every additional Three words or under, One Penny.

140 LBS. EXTRACTED HONEY, at 6d. lb. Sample 2d.—H. COLLIER, Nayland, Colchester. o 8

A PRONOUNCED SUCCESS.—The BURKITT BEE-GLOVE. With sleeves, 3s. 6d. per pair, post free. Without sleeves, 2s 6d. per pair, post free. The best, cheapest, and most satisfactory glove for bee-keepers.—EDWARD REYNOLDS, Glove Maker, Andover, Hampshire. Wholesale prices to the trade.

APIARY of 80 STOCKS BEES FOR SALE, including new store house, supers, doubles, feeders, and everything necessary; situated on Cotswold Hills, near Junction Station. Particulars on application.—"APIARIST," "B. B. J." Office, 8, Henrietta Street, W.C. o 12

BEES WANTED. New Standard Hives, painted, offered in exchange.—S. CUBITT, Trunch, Norfolk. o 15

CHAMPION "NEVER SWARM QUEENS" of 1905, in introducing cages, 7s. 6d.; Nuclei with Queens of 1905, five Standard Frames, comb, and brood, 15s.; guaranteed healthy. Begin now with "Never Swarm System," 11 years' absolute success, 3½d.—HARRIS, Wavendon, Bletchley, Bucks. o 14

FERTILE 1905 QUEEN TO SPARE, 5s., post free.—BOCOCK, Ashley Apiaries, Newmarket. o 22

FINEST ENGLISH HONEY, 50s. cwt. Sample 2d., tins free.—DUTTON, Terling, Essex. o 18

FOR SALE, TEN TEN-FRAME HIVES, Twenty-four Four-frame Nucleus Hives, with lids; Forty Baby Nucleus Hives, with frames to match.—For particulars apply F. HARE, 66, Dacre Road, Hitchin, Herts. o 16

FOR SALE, Edison Bell GEM PHONOGRAPH, almost new, with 42 selected Records, mostly Scotch, £3 10s.; or exchange for May-June healthy swarms.—WM. ARTHUR, Bee Appliance Dealer, Alloway, by Ayr, N.B. o 17

FOR SALE, B flat BASS CLARINET, with leather case; perfect condition; cost £18 18s.; accept £5 10s., or value in honey; approval.—FRED. READ, 30, Albion Road, Willenhall. o 13

FOR SALE THREE STOCK BEES, in nearly new Bar Framed Hives, £1 each. Also Three Stocks Bees, in "W.B.C." Body Boxes, 16s. each; all warranted healthy and very strong.—THOS. SHIPLEY, Folkington, Polegate, Sussex. o 9

FOR SALE, owing to owner going abroad, the whole of the CONTENTS of APIARY. Eleven Stocks, 1905 Queens, Cowan Rapid Reversible Extractor, Ripener, Cheshire's Wax Extractor, etc., etc. Lists on application to ALFRED HALL, Many Pitts, Marton, Blackpool. o 6

FOR SALE, an OUT-APIARY, together or separately, ten splendid Stocks of Bees, in "W.B.C." Hives, all young Queens, hive for queen rearing, supers, miscellaneous stocks, and bee house, complete, all in best condition, and guaranteed free from disease.—H. FIRTH, Rock Park, Birkenhead. o 5

FREEHOLD, nearly five acres, in sunny Hampshire. Bees (30 stocks), Fruit, and Poultry, with six-roomed dwelling, greenhouse, sheds, all stocks and appliances. Price, inclusive, £365.—HOBBS, Four Marks, Alresford, Hants. o 23

LIGHT HONEY, in screw-cap jars, 8s. dozen, on rail. — W. CANNABY, Ettington, Stratford-on-Avon. o 25

LIGHT HONEY, in screw-cap jars, 8s. dozen; Bulk, 53s.; tins free; carriage paid. Sample 2d.—CHARTER, Tatlingstone, Ipswich. N 78

Editorial, Notices, &c.

BRITISHBEE-KEEPERS' ASSOCIATION

(*Continued from page* 134)

CONVERSAZIONE.

The Chairman (Mr. Cowan) said he had had an experience extending to about thirty years on this subject—probably more than that of any other bee-keeper at the time. He had imported a large number of foreign bees for his own apiary, and for experiment. The reason why there was so much variation in the results of Italian-queen introduction was that every queen imported was given to a colony, whether she was worth anything or not. Instead of discarding inferior ones, they were all retained. His experience was that only one out of every ten imported direct from Italy was good for anything. Then, with regard to bringing in disease, he could say, with confidence, that foul brood was introduced into his apiary by Italian bees. He had never had it before then; but was, notwithstanding, successful in eradicating it—as the result, perhaps, of a great many years' experience in the treatment of foul brood. He could not understand any one saying that Italians were not so subject to this disease as English. All the evidence attainable showed that the disease was very prevalent in Italy, although not so virulent in form as its English prototype. Bee keepers there were wholly unable to keep it in check, and he did not think there were many apiaries in the country but what was affected more or less with foul brood. He was, nevertheless, very pleased that Mr. Sladen had done what very few bee-keepers had attempted, namely, studied the subject, and gone in for breeding queens and making a selection. That was a valuable work and deserved appreciation, especially as he (Mr. Sladen) was glad to give the bee-world the benefit of his investigations. In America, that service would be rendered at Government expense, and a large amount was spent annually there in appointing experts in entomology, who made experiements and issued reports, all of which was done by private enterprise in this country. He was sorry to be obliged to come to an adverse conclusion regarding Italian bees; but thirty years' experience had taught him that English bees were much better suited to their own climate than the others, which began work too early in the spring, while the natives stayed at home and saved themselves from the perils of our English weather, which decimated the foreigners. The latter also reared brood much earlier than English bees, and therefore they consumed more honey at a time when that commodity was unobtainable in the fields. That was the reason why English bees were the best honey producers. No doubt a cross between the Italian and our native bee was a good all-round serviceable worker and a good honey-gatherer; and if a selection could be made of the best queens and drones from the best stocks an improvement would be effected in any apiary. He used to select the very best queens and drones, and by that combination secured a strain of bees that gathered large quantities of honey; but there was another factor, those that suited one locality would often not suit another. He found that hybrids when acclimatised would do better here than in Italy.

Carniolans were more satisfactory here than any other foreign bee. Italian bees in Switzerland were useless. They did not succeed in mountainous regions at all. He believed that if apiculturists would devote more attention to the selection of different breeds, and use only the very best, they would improve their strain of bees very much. With regard to the "golden" strain, he looked upon them as a fancy bee; they had not proved themselves to be good honey gatherers. A number of breeders in America, desiring to obtain a highly ornamental insect, had crossed Italians, Carniolans, and others, selecting those with the most pronounced yellow bands, thus producing gradually the brilliant specimens now called "golden bees"—but there was very little Italian blood in them. With regard to propolising, as alleged against the golden bees, he had had no experience; but that would be a great drawback to honey production.

Mr. Carr, by way of emphasizing the Chairman's remarks, said that upwards of twenty-five years ago he was the owner of a fairly large apiary in Cheshire, and was classed among the successful honey producers, but in an evil moment he introduced half a dozen Italian queens to his natives, and would never forget it as long as he lived! They had not been there long before his apiary was loaded up with foul brood of a virulent type. So bad was it that he lost nineteen strong stocks in one year. He had never looked at Italians with favour since that date.

The nursery cage used by Mr. Sladen for protecting queen-cells and virgin queens (shown on page 114) was then passed round for the inspection of the company.

The Chairman suggested that as the next subject on the agenda—viz., "Forming Nuclei for Virgin Queens"—had already been ventilated in the columns of the B.B.J., it would be desirable to pass it over, and enter upon any matters that

members present might desire to bring before the meeting for discussion.

Mr. Weston thereupon introduced the subject of "Over-lacing Sections," which all who were in the habit of attending shows knew frequently caused trouble between judges and exhibitors. He had discussed the matter with Mr. Lee (of James Lee and Son), and they thought the difficulty might be surmounted. He had always previously used a plain band for his own work, but he now exhibited samples (printed respectively in blue and red) of an ornamental band which had been cut out by means of a die, and therefore could always be made exact to size. It was somewhat narrower than the one now in use as regarded lace-edging, and there were spaces left for the name of the producer or salesman, and the county where the honey was produced. As to price, he left that to Mr. Lee and his catalogue.

Mr. Reid said this matter was a small one, but, nevertheless, important. It was a great advantage to have an improvement of the band suggested, which would not only save labour to bee-keepers, but also trouble to judges, who sometimes had a most disagreeable duty to perform when disqualifying excellent sections owing to the carelessness of the producer in preparing them for exhibition. As a judge, he had been grieved to be obliged by rules to reject good sections because of over-lacing; but it would not be fair to those who kept within the law by using narrow lacing if others who did not were allowed to steal the advantage in appearance with impunity. He thought the blue labels shown should not be issued at random; they gave the comb a darker colour than the red ones.

Mr. A. D. Woodley was informed by Mr. Weston that the labels could be used for either 1⅞-in. or 2-in. sections. He (Mr. Woodley) acknowledged that the over-laced section was prejudiced on the show-bench, but hardly thought the exhibit ought to be disqualified solely on that account. But where the exhibits were equal in other respects, the narrow-laced exhibit should certainly secure the prize.

A discussion then arose with regard to the fitting of the labels round the square corners of the section, in which Colonel Walker, Mr. Weston, Mr. Pugh, and the Chairman joined, the conclusion being that a mere slit or cut made at each corner would be quite sufficient to insure a perfect adjustment. The label was cut out by a steel die, and therefore must always be accurate in width.

The Chairman said the next point for discussion referred to heather honey, of which he had a number of samples there. He called attention to one specimen particularly, which had been sent by a gentleman whose desire was to afford an opportunity to those present of comparing samples of heather honey—one from *Calluna vulgaris*, or ling, and another from *Erica cinerea*, or bell heather. No doubt their friend had been animated with the best intentions; but he had, unfortunately, put both his samples in one glass jar, and had forgotten to tell them how to get at the bottom sample for tasting. (Laughter.) He (the Chairman) would pass the samples round, and invited the audience to say which was which, as it had puzzled himself. The samples were passed round amid good-humoured remarks. The several other samples were also handed round the room for examination.

Colonel Walker had been at some trouble to obtain heather honey to be sent to New Zealand. He had tried both Scotland and England, but could not get anything that could be called heather honey except from Scotland. There could be no doubt that the specimen he exhibited came from ling, and not bell-heather. It was produced on the Cheviot Hills, and the bee-keeper explained, as a proof of its derivation from ling, that bell-heather did not blossom at the time it was gathered, and there was nothing else for the bees to work on. It was often alleged that absolutely genuine heather honey was difficult to obtain, and the explanation of this was that a good many bee-keepers, when they took their hives to the moors, left more or less of honey already in the combs which had been gathered from other sources, and that being extracted with the rest, injured the general quality. His friend in the north said that it was impossible to secure bell-heather honey, but he knew it was done in the south. He was sure the company would all agree that what he now exhibited was a genuine product, and could not be classed on the show-bench with anything else. The gentleman, who was known to most of those present by his articles in the B.B.J. over the initials, "D. M. M.," had been good enough to obtain the sample submitted for him from his own neighbourhood. Another gentleman had also sent him some honey from the Derbyshire moors, but this was perfectly different from the other sample, although tasting more or less like heather honey.

The Chairman showed a sample of "ling" honey gathered at Guildford, Surrey, by Mr. W. H. Wood's bees, also one sent by Miss K. M. Hall obtained at Hindhead, and was from heather of both kinds. He also passed round a specimen of honey from Eversley (Charles Kingsley's parish) gathered from heather and clover.

Mr. Carr stated that the last sample was of a kind for which they had recently introduced a new class at several important shows—namely, "heather mixture."

(Conclusion of Report next week.)

REVIEWS.

The Natural History of Selborne, by the Rev. Gilbert White, M.A. Rearranged and classified in subjects by Charles Mosley. Published by Elliot Stock, London, 6s. net. The notes and letters of the Rev. Gilbert White, which form the now famous "Natural History of Selborne," first appeared in print in 1789, when their author was in his seventieth year. Since that time many editions of the work have appeared, the character of each having been as varied as they are numerous, while each succeeding edition has been "edited" in a manner calculated to maintain for it some specific characteristic. Although close on one hundred editions of this most popular work have been published, the one before us differs from the others in that it is arranged, not strictly in the form of letters as they left the author's pen, but according to the species described therein, so that it is more convenient for reference, whilst not detracting from its interest to the general reader. Throughout the present edition the original sequence of White's arrangement has been preserved, taking first the letters addressed to Thomas Pennant, Esq., and afterwards those to the Honourable Daines Barrington; and to obviate confusion the former series are distinguished by figures and the latter by roman numerals. Mr. Mosley's arrangement of the work will be read with interest, and the very full index which accompanies it makes it especially valuable to students and lovers of nature. The book is tastefully printed in crown 8vo size, and suitably bound. It has as a frontispiece the large, quaint, folding plate of the view of Selborne which appeared in the first edition published in 1789.

The Writers' and Artists' Year-Book. A. and C. Black, London, 1s. net. This little book of seventy-eight pages is a directory for writers, artists, and photographers. The difficulty of knowing where to place articles is one that confronts not only the tyro, but the man of considerable experience. This annual comes to his assistance, and indicates the requirements of editors, so as to meet that want. A list of journals is given, and special attention paid to all details of importance, such as the length of MS. likely to be accepted, and the kind and quality of matter suitable. In addition to the list of papers and magazines with details, there are lists of publishers, colour-printers, literary agents, and a classified index of papers and magazines. There are also instructions for authors and a guide for correcting proofs. The book can be recommended, and will be found very useful, as it contains a large amount of information in compact form.

Structure and Development of the Compound Eye of the Honey-Bee. By Everett Franklin Phillips, Ph.D. The author, who is now conducting the experimental apiary of the Department of Agriculture, Washington, D.C., while at the University of Pennsylvania studied the morphology of the compound eye of the honey-bee, which has puzzled zoologists for years, and respecting which divers views are still held. With an intention of adding some evidence from the embryological point of view, Dr. Phillips began his work, in the belief that a detailed examination of this one insect eye would throw light on the adult morphology. His investigations lead him to the conclusion that the primitive arrangement of ommatidia is tetragonal, that the hairs over the lens are secreted by binucleated hair-cells with intracellular ducts which lie between the ommatidia. The ommatidium is composed of eight or nine retinula cells and about twelve outer pigment cells. The rhabdome and cone are intracellular secretions, while the lens is an extracellular secretion of the pigment cells. The lens is secreted by the *corneal* pigment cells, which early in the pupa stage lie distal to the cone, and possibly also by the outer pigment cells. The ommatidium arises from a strictly one-layered epidermis, which passes directly from the larva to the pupa without the loss of any cells or addition from other tissues. The interpretation of the formation of the ommatidium which Dr. Phillips holds from an examination of the eye of the bee makes possible, he says, a very close homology of the elements of the compound eye with the ocelli of insects, such as was held by Grenacher. From sections of ocelli of the pupæ of the bee which were examined, it was evident that the middle ocellus arises from a double invagination, indicating a fusion of two organs, while the lateral ocelli arise from single invaginations. These investigations are published in the *Proceedings of the Academy of Natural Sciences of Philadelphia*, and the paper is fully illustrated.

NORTHUMBERLAND AND DURHAM B.K.A.

ANNUAL MEETING.

The annual meeting of the Northumberland and Durham Bee-keepers' Association was held on Saturday, March 31, in the rooms of the Young Men's Christian Association, Blackett Street, Newcastle. Mr. W. Armstrong, Blackhill, presided. The annual report stated that the year had been a very poor one for honey. A balance of £4 4s. was reported in favour of the funds of the Association. Lord Armstrong was re-elected President. It was announced that Mr. James Waddell, who for so long had acted as honorary secretary of the

Association, had resigned that position, although he had agreed to continue as the Association's certified expert. Mr. J. C. Hedley, Stocksfield, was elected as Mr. Waddell's successor, and Mr. J. W. Wakinshaw, Westerhope, was appointed hon. treasurer. The Committee was re-elected. It was decided to continue the excursions, and also the honey show, which had always proved so successful in the past. The Association decided to make application to the County Councils of the two counties to appoint an expert for the counties.—(*Communicated.*)

Correspondence.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

*** *In order to facilitate reference, Correspondents, when speaking of any letter or query previously inserted, will oblige by mentioning the number of the letter as well as the page on which it appears.*

NOTES BY THE WAY.

[6270.] With the advent of April a spell of new life has been infused into the apiary by the days of brilliant sunshine we have been blessed with. The palm or willow, and also the dandelion, have begun to blossom freely in sheltered spots, besides many other smaller flowers in the fields and hedgerows from which the bees gather either pollen or honey. The early fruit trees (sorry we have so few in our near neighbourhood) are again putting forth their snowy blossoms, so that every week onwards there will be a continually extending breadth of forage from which the bees will gather stimulating food for the growth of brood-nests.

Foreign Bees.—I am unable to speak personally of the value or otherwise of the Italian or other foreign races of bees, as I have persistently objected to their introduction to my apiary. I have done this so that I should not knowingly allow any trait of foreign blood into my strain of English bees. These I have endeavoured to improve, and although still a long way from my ideal strain, my experience shows that if I get a specially prolific queen, although her progeny may be excellent honey-gatherers, they are not so docile in handling as others which are not so prolific. There is usually a great deal of fuss made of extra early prolificness of queens, as the pages of the B.B.J. often show, but this early production of bees before there is honey to gather is, to my mind, not an unmixed blessing, seeing that these very populous early colonies have to be fed, either consuming the food stores of the hive, or from the hand of the apiarist, and should the early honey-flow fail, such stocks will either swarm excessively or will require constant attention—i.e., feeding till honey can be got outside. Thus we find that the early promise of such stocks compares unfavourably with colonies of English bees which seemed more backward than the foreign or hybrid races early in the year. The apiarist should always know his district and aim to get his stocks into the pink of condition just in the nick of time for the first honey-flow. To those living in the fruit districts these early breeders may be just the race of bees to keep, but where white clover is relied on for the harvest and this queen of bee flowers does not bloom till the second week of June, of what good to the bee-keeper, I ask, are hives full of bees and empty of stores by mid-May? These are the salient points to be remembered if your bee-keeping is going to be successful. During the many years I have kept bees the balance has always been on the right side, and I have always been able to have my stocks ready for the first honey-flow, and have been successful in securing a fair share of the good things obtainable by bee-keeping. Therefore my readers must not blame me for having a good word to say for "Ye Olde Englishe Bee."—W. Woodley, Beedon, Newbury.

SUNDRY NOTES ABOUT BEES.

[6271.] *Facts and Theories.*—I often notice many things about bees that facts seem to disprove. In B.B.J. for March 1 I see Lord Avebury tells us bees prefer blue flowers. But blue flowers in Britain are by no means common; about the only blue flower I know of growing wild is the bluebell, or wild hyacinth. This the bees frequent, but most of the flowers from which they gather their largest stores are not blue. Then as to keeping hives warm, a swarm of mine went into a neighbour's roof, where they have lived for some years past. They are on the north end of the house, and are much exposed to cold and draughts without having any alighting board; they have to settle on the side of the house and crawl in at a small hole, yet these bees seem wonderfully strong, though during the last five years they have lived without feeding and without care. Then again, one of your correspondents spoke of finding a swarm in a hedge late in the autumn, exposed to wind and to wet. I have heard of the same thing before, here they seem to have thriven with nothing to keep off the weather. Then as to dryness of hives and cleanliness: A favourite resort of bees is a hollow tree. I have seen

many in this position where they have lived for years. There must always in such a position be more or less damp from decayed wood. In such a place all the dead bees and débris of the hive must fall to the bottom, and these accumulate year after year, no spring cleaning is done for them, but foul brood does not seem to clear them out! It is recommended to set hives over six feet apart; in a bee-house I made a good many years ago for six hives, they were so near together they almost touched, at the swarming season when "hanging out" the bees came in contact with one another, and seemed to fraternise in the most friendly manner; but I do not remember losing queens under these circumstances.

In the Italian Alps and other parts of the Continent, the bees are kept in long boxes, about a foot square; the further end from the entrance can be opened and the combs cut out. Those boxes I have seen packed together in a sort of bee-shed, or house, closed in at the back and sides but open in front; to the best of my recollection, there could have been little more than two feet between these boxes.

As to "tanging," when the swarming time comes my neighbours will still hear me belabouring some tin pot as I used to do as a lad, fifty years ago, for I still believe that the sound confuses the bees by drowning the hum of their leaders, that is, the scouts that have found a new home for them. Some will smile, so let them, but if any one will knock a swarm of bees out on a sheet, place the empty hive a little way from the mass, then take two or three bees and place them at the entrance of hive, as soon as they have discovered their home they will set up a hum of satisfaction, and when this is heard by the rest of the bees, they will immediately rush towards the hive in a stream, showing that they recognise a call from their fellows.

My bees seem to care little for mignonette, although I sow a quantity every year; in some localities I have found it very different. I have a yellow flower, "Limnanthes Douglasii," of which they are passionately fond; it grows about six inches high.

Nuptial Flight.—I was much interested in the letter from your correspondent in America with regard to queen-mating, or nuptial flight. From observations I made last summer, I am inclined to think Italian drones have only a poor chance. The Carniolans are stronger on the wing, and would be more likely to mate a young queen. I succeeded in bringing them down to the ground by the dozen, or even on to my hand, by the attraction of a young unmated queen that I allowed to fly from the end of a fishing rod detained by a fine thread and noose round her body, but a knot has to be made in the noose so that it should not pull tight and injure her. As she flew in the air thus detained, it was a curious sight to see the flock of drones that gathered round her. I cannot help thinking that in this way something might be done as to special mating.

I notice remarks as to bees cleaning their antennæ, but no one seems to have noticed what I spoke of in B.B.J. more than a year ago, that every bee on leaving the hive passes its fore legs over its antennæ first.

The Habits of Wasps.—Some time ago, I asked a question in BRITISH BEE JOURNAL with regard to the habits of wasps. Since then I have found my question fully answered in a book recommended to me by one of the officials in the private department of Natural History in the Kensington Museum, and if any of the readers of B.B.J. are interested in the subject, they will still be able to get a copy of the book, as Messrs. J. Wheldon and Co. had several copies on hand, second-hand, but as good as new. The title of the book is "British Social Wasps," by Edward Latham Armerod, M.D., J. Wheldon and Co., 38, Great Queen Street, London, W.C. There are coloured plates of our seven social wasps, also plates of their nests. The price is either 3s. or 4s. I send name for reference, and sign—"HUMBLE BEE," Bridge of Allan.

BEE PARALYSIS.

[6272.] Being one of the few scientific students of the phenomena of heredity, possibly the following few particulars may be of interest to those who have recently written in the B.B.J. with reference to bee-paralysis. As with the human being, so with birds, insects, animals, etc., the whole nervous structure is always inherited from the female line, and never from the male line. Hence, whatever imperfections of the nervous system may be found in the female parent is reproduced in a more or less degree in the offspring. Paralysis is an affection or breakdown of a portion of the nervous system, and except in very rare cases is there any possible cure for it, the cure or alleviation, if any, coming through strict attention to diet, and subjecting the paralysed limb to electric light rays. If we cannot cure paralysis in human beings, is it any wonder that we cannot cure bee-paralysis? The only cure—if it really can be called a cure—is to introduce a new queen into the colony, which will be tantamount to introducing a new nervous system (through young brood) into the hive. For myself, I am rather afraid that bee-paralysis is one of the penalties we have to bear as the result of introducing so much female line (*i.e.*, queen bees) from Southern European countries. I think I have read

it somewhere in the B.B.J. that bee-paralysis is more prevalent in the warmer countries than here. Queens are yearly imported in thousands into this country, many of them, no doubt, having incipient forms of foul brood and of paralysis in them, which in due course shows itself in the young brood, to the surprise and disappointment of many bee-keepers. Heredity will always have its way.—GEO. SMITH, Cardiff, March 15.

HUMBLE BEES FOR NEW ZEALAND.

A SUCCESSFUL SHIPMENT.

[6273.] You will be pleased to know that I have just heard from Mr. Pemberton, secretary of the Canterbury Agricultural and Pastoral Association, New Zealand, that of the queen humble-bees sent out to him by the s.s. "Paparoa," last December, 66 per cent. arrived alive. The Association, he says, is very pleased with the success of the experiment, as in the two former shipments (made in 1884), only 15 and 17 per cent. arrived alive. All the queens in the shipment sent last December were supplied by readers of the BRITISH BEE JOURNAL in answer to my advertisements in it. Without your readers' kind help it would have been impossible to have made the shipment. I was pleased to see by this week's B.B.J. that the reading of my paper at the conversazione was followed by an interesting discussion about Italian-English cross-breds.—F. W. L. SLADEN, Ripple Court Apiary, near Dover.

NOTES FROM MIDLOTHIAN.

SPRING BEE-FORAGE.

[6274.] The bees of our Southern brethren will be busily employed at present working on the newly-opened spring flowers, while ours are snow-bound, and it makes one feel inclined to break the tenth commandment. I notice, however, that crocus buds are just beginning to appear. This is our first bee-forage, it being too cold for snowdrops to be of any use to our bees, so we must wait for the crocus, and then watch the bees "waddlin' hame" laden with pollen, varying in colour according to the many tints of the flowers they have visited. Next comes a weed called here "Shellagh," the flower of which appears before the leaves and yields pollen of a bright yellow colour, like that of the dandelion. Then follows the whin, with its reddish-yellow pollen. These are all merely pollen-producing; after which comes the *arabis albidis*, or wall cress, which is the first real honey yielder, its pollen being cream colour. But when the willow blooms, with its abundance of pale yellow dust, all other plants are deserted.

It is too cold yet to make a general inspection of our hives in these parts, in spite of our anxiety to discover how our stocks have fared through the winter.

Some bee-keepers are opposed to the use of zinc for covering hive-roofs, and to these I suggest linoleum that has been discarded from household use. This, with two coats of paint, makes an excellent roof covering.

I am in favour of the standard-frame, but would like a broader top-bar and self-spacing, so as to do away with metal ends and queen-excluders, for I consider these to be a hindrance to the bees working freely in supers. In reply to my query in B.B.J., I received a self-spacing frame from a Glasgow firm (name enclosed), through your kindness. It is a good and cheap frame, at 1s. 6d. a dozen, and I mean to give them a trial this season.—MAC, Midlothian, March 12.

SCOTCH HEATHER HONEY (?).

IN BARRELS AT LESS THAN 3D. PER LB.

[6275.] In answer to the letter in your paper of March 22 under the above heading, having a very large connection with British bee-keepers, I hasten to say that it is utterly impossible to sell Scotch heather honey at 3d. per lb. in 5-cwt. barrels. We do a big business both in buying and selling Scotch honey, and last year gave 1s. 4d. per lb. for heather honey in the comb, and could not meet the demand, as the supply was very limited. Scotch honey in any shape or form cannot be bought for the price of 3d. per lb. I should have no hesitation in saying the so-called 5-cwt. barrels offered as pure Scotch heather honey at under 3d. per lb. is nothing more or less than foreign honey.—R. STEELE, Wormit, by Dundee.

[6276.] My attention has been called to a short letter in your paper written over the signature of Shaw Brothers, 12, Idol Lane, London, and headed "Pure Heather Honey." Were it not that the letter seems to be a serious appeal to Scottish bee-keepers from a London firm for important information, I should be disposed to ignore it as a little joke at our expense. I have studied bees and all that pertain to them, first, in a natural science class, under a distinguished science teacher, and secondly, I have kept bees for pleasure and profit for the last 18 years. Again, I happen to have lived in one of the finest clover and heather honey districts in Scotland—clover fields spread on every side, while rich heather in boundless acres lies only three miles away. Last season was a good clover season, and from one hive I took over 100lbs. of pure clover honey. But the yield of heather honey all over Forfarshire, and Perthshire as well, was a total failure. Stocks returned from the moors much

lighter than when they were taken up, and pure heather honey was so scarce that a well-known and very extensive dealer in Birmingham, whose catalogue is before me, quotes Scotch heather honey at 1s. 6d. per lb. retail, and that only subject to it being in stock. Until indisputable proof is furnished, I venture to express the opinion that we did not get five cwts. of heather honey last year in the combined counties of Forfar and Perth, and the failure of the yield was the same everywhere. If the firm in question will send me a sample of the so-called heather honey, I shall put them in communication with a market where they will get at present four times the price quoted, that is, provided that it is the real article. The usual price retail for clover honey is about 8d. per lb. in good seasons, and in poor years 1s. per lb. is always easily obtained. In a word, I unhesitatingly assert that it is absolutely impossible to get any description of pure Scotch honey, either clover or heather, at such a price in London or anywhere else.—I enclose my card, and sign "CASTIGATOR ASINORUM."

[6277.] Replying to Messrs. Shaw's letter addressed to you under date 22nd ult., I beg to say it is utterly impossible for any Scottish firm to sell "pure Scotch heather honey" in London under 3d. per lb. During the past two years "heather honey" has been extremely scarce in Scotland, and that more especially in the past season. The price of "pure Scotch heather honey" during the latter year I would assess at 1s. 3d. per lb. When "pure Scotch heather honey" is quoted under 3d. per lb. in 5-cwt. barrels, ex wharf, London, it is high time a "honey" case was called in the English Law Courts, a la the recent "Scotch whisky" trial.—A. NICOL SIMPSON, Whinhurst, Fordoun, N.B.

Queries and Replies.

[3250.] *Robbing in Spring.*—One of my stocks of bees was a very weak one from the end of last season, it having suffered from "robbers." On overhauling the hive after autumn feeding-time I was surprised to find it in such a weak state, but with care and attention I hoped to preserve it through the winter. On glancing at its condition recently by simply raising one side of the quilt I found there was a nice lot of food (sealed), and the bees appeared lively and healthy, although not numerically strong. Sunday last being a summer-like morning, I watched this hive, hoping to see the bees take flight, but none appeared. In the afternoon, however, I had another look and found the front of the hive "swarming" with bees. I could not understand this for the moment, but I soon became convinced, from the fighting and "chucking-out process," that "robbing" was going on. I also felt sure that if all the bees in the hive had been flying there could not have been such a crowd as was in the air, so I nearly closed the entrance and tried carbolic cloths to stop the robbing if possible, but could make no impression. In the evening, when all was quiet, I opened the hive, only to find it deserted, all the living bees having gone, leaving only the dead lying on the floor of the hive, which was thickly covered with them. I found the queen wandering about in an aimless manner, and boxed her up with a few half-dead bees picked up from the ground, which I soon revived with honey and warmth. The robbers had cleared out one frame of honey and part of another during the afternoon, so had evidently had it all their own way. Feeling annoyed, naturally, after getting the bees over the winter safely, to have them destroyed and robbed out by strangers, I took the trouble to follow the flight of the robbers, and traced them to a neighbour's hive about 200 yards away. This neighbour, I have good reason to believe, has neglected his bees all through the winter. He only commenced to keep bees last season, and has been depending on strangers to look after them. On the first fine day I expect these marauders will make another raid on my hives, in which case I should feel inclined to treat them rather severely. Meantime, I have the queen mentioned, along with the few bees saved with her—on hand, and will be glad if you can say: 1. What is the best thing to do with her? There are still five filled combs in the empty hive, and I thought it might do to buy some bees without queen, and so ask: 2. If so, is the present time suitable, or should I take, say, three frames of brood and bees out of another stock I have, and put the queen to them, of course changing the hives in the usual way? No doubt the robbers would return and again attack the hive that had been exchanged, but would probably meet with a warm reception. 3. Would it be too risky to change frames of brood at the present time? I do not expect to be able to keep the queen alive long, not having proper conveniences for so doing, but do not like the idea of losing a queen just in her second year. My other four stocks are all in good condition, and I assured myself the robbers did not come from either of these. I have only kept bees for two seasons, and regret having to trouble you with such a long tale of woe, but shall esteem it a favour if you can give me some advice through your

valuable paper, the B.B.J., which I have taken in since I started, and from which I have often obtained very valuable information.—I send name for reference, and sign—Borrowash, Derby.

Reply.—1. A queen bee—accompanied by a dozen or so of her own workers—is of no use at this season, unless for the purpose of uniting to an established stock. 2. The risk attached to your proposal to buy queenless bees for uniting to an alien queen are so great, in the hands of a beginner, that we should not recommend you to try it. Nor do we approve of the alternative plan of giving brood from another hive, as it would probably end in the made-up new stock being "robbed out" as before. 3. Yes, altogether too risky, under the circumstances detailed above. It is very likely that the bulk of the "robbed-out" bees have, so to speak, "gone over to the enemy—*i.e.*, have joined the stock from whence the robbers came.

[3251.] *Transferring Bees from Skeps.*—I am sending sample of comb from a skep I bought last year, which threw a good swarm, besides giving surplus honey. I intended transferring them this spring, according to instructions in "Guide Book," but had a look to see what the condition of bees was like yesterday, and found that the bottoms of the combs were turned up inside, owing to the skep being worn out, while some of the cells look suspicious owing to perforations in them. I am unable to judge whether it is foul brood or not, but can hardly think the bees would attempt to breed at the bottom of such black old combs. Will you, therefore, kindly send a line on enclosed postcard by return post if the stock is diseased, so that I can burn the lot without delay if necessary, because I noticed robber bees about the skep yesterday and to-day. I only started bee-keeping last year, and have spent a lot of money on them, and now have seventeen stocks, whichI trust are all healthy. I am also anxiously looking out for reply in B.B.J. regarding another sample of comb sent a fortnight ago. I had fears of foul brood in my hives last summer, but the secretary of the County Association—who paid me a visit—assured me that my stocks were all perfectly healthy. I must say that I enjoy reading the B.B.J. more every week, and find bee-keeping a delightful and profitable hobby. Hoping we shall have a prosperous season in 1906.—H. Adams, Rugby, April 3.

Reply.—The three small bits of black old comb make a bad sample to judge from with regard to disease, there being no trace of brood in the cells. We have, however, found no trace of foul brood after as close an examination as was possible under the circumstances. When the skep is fairly full of bees it may be set above the frame-hive, and the bees allowed to work down as set forth in "Guide Book."

[3252.] *Spacing Combs for Winter.*—I should be much obliged if you would give me your advice on the following:—In August last year I purchased 5 lb. of driven bees, which were hived on eight frames of foundation. They were fed rapidly, and by October 1 had about 30 lb. of sealed stores. I then packed up and spaced frames for wintering. To-day has been a glorious day, the bees flying freely and carrying in pollen in abundance; therefore I thought it a good opportunity to examine the hive, but when I began to draw the frames to the proper distance apart I found that the face of some of the cells were touching. Of course, these cells were only those on the outside of some of the combs, but it meant squashing any bees that happened to be on the cells, besides blocking the passage ways to a certain extent. I therefore ask: 1. What ought I to do? Should I cut the combs down a bit, or leave it to the bees? 2. I also found that the empty cells on two of the combs contained eggs and brood; the other six were more or less well filled with sealed stores. Should these be extracted, or is it likely that the bees will consume the stores quick enough to allow the queen to lay?—Interested, Warwickshire.

Reply.—1. If the combs were spaced at the proper distance apart when comb-building was in progress last autumn, and the combs sealed over properly, so that the face of each did not touch, at the time, we cannot understand how there has been any subsequent alteration in width so as to cause the comb-face to touch when examined recently. However, the only remedy is to cut down the cells to proper width without delay, so that the frames may be workable. 2. It is good practice to uncap a few inches of sealed food at regular intervals when queens are wanting room for egg-laying. If the cell-capping is bruised or the surface scratched so as to expose the food, it will do equally well as uncapping, and is less trouble.

[3253.] *Bees Dying Out in March; Small Queens.*—Will you kindly tell me through your valuable journal if I am right in supposing that the queen bee enclosed for your examination is one hatched from an egg placed in the queen-cell by the bees after the third day? I ask this question because the dead queen seems so very small. A friend of mine last year divided a strong colony of bees into two stocks, one of which has wintered fairly well, but the other from which the queen in question was taken, has died out through weakness, and being short of food. Do you

consider that a small queen like that sent would be capable of properly heading a stock? In other words, would she be as prolific as a larger one? I enclose name, etc., and sign—BUSY BEE, Evesham.

REPLY.—It is difficult for us to judge what the queen sent might have been, because the dead insect was so insecurely packed for post as to be unfit for proper examination when received. Beyond being rather small, there was nothing to prevent her from being a prolific mother (as small queens not seldom are) if the stock had not perished from want of food.

[3254.] *Re-queening by Beginners.* — I started bee-keeping last year, and have now three stocks, two Carniolan and the other "extra golden" Italians; the last-named being the best stock. Such knowledge as I have acquired since then has been gained by experience and in reading and re-reading the "Guide Book" and "The Honey Bee," along with the B.B.J. I now wish to re-queen the Carniolan stocks with hybrid queens in May next, but I have not seen any mention made with regard to what becomes of the queen-cells which the workers prepare when they discover loss of queen. I therefore ask: 1. Does it mean that they swarm with the introduced queen when the young queens hatch? And if so, must I cut away queen-cells, or what other preventive can I use? 2. Do you stock sugar cane; and, if so, is the present price the same as advertised in the February 1 number of the B.B.J.?—F. G. T., Twickenham.

REPLY.—We cannot quite follow this query as written, but it is plain you have not quite got the right idea of how to introduce alien queens to established stocks. By perusing the chapter on this subject in "Guide Book" (pages 127 to 133), it will be seen that no question of swarming or of "cutting away queen-cells" arises. The bees accept the new queen, and all goes on well if proper care is taken, and no "preventive" is needed. 2. The prices of cane sugar are same as in February last.

[3255.] *Transferring Bees.*—I have wintered a skep of bees inside a frame-hive on the top of a box of frames. I now wish to drive the bees from the skep to the frames, but I am doubtful about the proper time to do it, so as not to lose more of this season's honey than can be avoided. I did the same with one lot last season, but I left it too late (July, I think it was), and consequently there was very little surplus honey to take.—G. A., West Ealing, April 7.

REPLY.—Our advice is, do not do any "driving" from skep at all. Let the bees transfer themselves to the lower hive, which they will do in due course if the frames are fitted with full sheets of foundation. The plan given on page 140 of "Guide Book" is far preferable to that proposed, and will lead to better results.

Notices to Correspondents & Inquirers.

J. G. (N.B.).—Twin-frames for Queen-raising.—The idea of a twin-frame for use in queen raising is not new, and is dealt with very fully in Mr. Cheshire's work on "Bees and Bee-keeping," Vol. II. In fact, the illustration on page 304 shows the twin-frame very similar to your own. But we have never heard of its having met with favour by queen breeders, and it has in consequence fallen into disuse.

"BOB" (Berks).—Dealing with Slightly Diseased Stocks.—1. The present fine weather will be suitable for operating, but it is a pity the six lots could not have been joined up to make three stocks for wintering when the disease was discovered last year. Great care should be taken to avoid starting robbing by your other hives; in fact, it would be helpful if the work could be done after nightfall under cover. 2. It is easy to disinfect metal dividers by boiling for a couple of hours.

INQUIRER (Newton Abbot).—Books for Use of Candidates for Expert's Certificate.—1. The author of "Advanced Bee Culture" is Mr. W. Z. Hutchinson, editor of the *Bee-keeper's Review*. It is, as the name implies, a work on the latest developments in the craft, and is reviewed on page 81 of B.B.J. for March 1. 2. The other books mentioned simply relate to queen-rearing. 3. Members of the B.B.K.A. have access to the library of the Association, or can have the books on loan by applying to the secretary. 4. Yes, the books really needed by candidates are named in the syllabus.

C. B. A. (Aylesbury). — Softening Stiff Paint.—The best advice on the point could be got from a practical painter. For ourselves, however, we should try adding a little boiled oil—such as painters use—for thinning it down.

T. STAPLETON (Cornwall). — Six-frame Cowan Extractors. — Very few persons in this country need a six-frame extractor, but machines of that size are often used in the U.S.A., and the Root Co. regularly make machines of that size.

A. J. H. (Chadwell Heath).—Dead Queen Cast Out.—The queen sent has evidently been "balled" and cast out by the bees themselves. There is no means of testing dead queen as regards being mated or not, as the body is too dry and hard

for examination, but it is probably the one from broodless stock.

F. A. S. (Ealing).—Transferring Bees and Combs.—1. The frames and bees may be moved into the W. B. C. hives on any fine day. 2. Transferring will in no wise alter the condition of the colonies transferred.

Suspected Combs.

J. W. M. (Dunoon, N.B.).—All brood in sealed cells has dried up and disappeared, but we find signs of foul brood in comb about which there can be no mistake.

CURRIE (Midlothian).—Foul brood is developing in comb sent.

J. D. A. (Cornwall).—Comb is not only misshapen and old, but there are diseased cells in it. We should burn all combs and disinfect hive.

AMATEUR (Chester). — Comb contains chilled brood only.

ANXIOUS (Bradford).—There is nothing in dead bees to help us in diagnosing either for foul brood or death of bees, while the bit of clean white comb contains only honey or syrup.

*** *Some Letters, Queries and Replies, &c., are unavoidably held over till next week.*

Special Prepaid Advertisements.

Twelve words and under Sixpence: for every additional Three words or under, One Penny.

Advertisements for current Issue must be received by first post on Tuesday.

A PRONOUNCED SUCCESS.—The BURKITT BEE-GLOVE. With sleeves, 3s. 6d. per pair, post free. Without sleeves, 2s 6d. per pair, post free. The best, cheapest, and most satisfactory glove for bee-keepers.—EDWARD REYNOLDS, Glove Maker, Andover, Hampshire. Wholesale prices to the trade.

ABOUT TWO CWT. ENGLISH HONEY FOR SALE.—H. LETCHFORD, Longfield Hill, Kent. o 54

BEES.—Two Stocks, in Standard Hives, cheap.—SMITH, Sherbourne Cottage, Finboro' Road, Tooting Junction, S.W. o 43

BEES, HYBRID CYPRIANS, good tempered, excellent workers. Stocks, 20s.; smaller, 15s.—JOSNAM, Haytor, Newton Abbot. o 46

BEES FOR SALE, several stocks, on seven frames; last year's Queens; healthy. Particulars on receipt of stamped envelope.—TREBBLE, Bee Expert, Romansleigh, South Molton. o 35

CHAMPION "NEVER SWARM QUEENS" of 1905, in introducing cages, 7s. 6d.; Nuclei with Queens of 1905, five Standard Frames, comb, and brood, 15s.; guaranteed healthy. Begin now with "Never Swarm System," 11 years' absolute success, 3½d.—HARRIS, Wavendon, Bletchley, Bucks. o 14

CLOVER HONEY, 56s. per cwt. Sample 2d.—A. J. NOYES, Pewsey. o 28

EXCHANGE FIVE PULLETS, cockerel, Buff Cochins, Lady Gwydr Tomlinson's celebrated train, for strong healthy Bees, or sell for 35s.—WILLIAMS, Cefncoed, Penthir, Mon. o 53

FERTILE 1905 QUEENS TO SPARE, with introducing cage, 5s., post free. Safe arrival guaranteed.—BR. COLUMBAN, Buckfast, Devon. o 47

FINEST WILTSHIRE HONEY, guaranteed pure, 48s. cwt. Sample 2d.—TIBBLE, Netheravon, Salisbury. o 51

FOR SALE, Edison Bell GEM PHONOGRAPH, almost new, with 42 selected Records, mostly Scotch, £3 10s.; or exchange for May-June healthy swarms.—WM. ARTHUR, Bee Appliance Dealer, Alloway, by Ayr, N.B. o 17

FOR SALE, an OUT-APIARY, together or separately, ten splendid Stocks of Bees, in "W.B.C." Hives, all young Queens, hive for queen rearing, supers, miscellaneous stocks, and bee house, complete, all in best condition, and guaranteed free from disease.—H. FIRTH, Rock Park, Birkenhead. o 5

FOR SALE, SIX DOZEN SECTIONS, finest Clover Honey, 8s. dozen cash.—DOBSON, 10, Harlow Road, Lidget Green, Bradford. o 30

FOR SALE, several good strong STOCKS of BEES, in Bar Frame Hives, 18s. per stock.—Apply J. H. MOULDEN, 37, The Leys, Chipping Norton. o 39

FOR SALE, guaranteed healthy STOCKS of BEES, on Standard Frames. 1905 Queens, £1 each; box 1s. extra, returnable. Inspection invited.—ROWLAND, Cliff, Holbrook, Derby. Expert to the Derbyshire B.K.A. o 45

FOR SALE, FIVE good, healthy STOCKS of BEES, in Standard Frame Hives (reason, long illness).—For further particulars write J. BAKER, Kingsbridge, Devon. o 31

FOUR NEW "W.B.C." PATTERN HIVES, 12s. 6d. each.—PRITCHARD, Wamalong Road, Salisbury. o 37

FREEHOLD, nearly five acres, in sunny Hampshire. Bees (30 stocks), Fruit, and Poultry, with six-roomed dwelling, greenhouse, sheds, all stocks and appliances. Price, inclusive, £365.—HOBBS, Four Marks, Alresford, Hants. o 23

HOME-MADE BEE SYRUP FOUNTAIN, easily made from golden syrup tins. Will send model (which must be returned) for 6d., post free.—HAWKINS, Beekeeper, Burgh Heath, Epsom. o 44

LIGHT HONEY, in screw-cap jars, 8s. dozen; Bulk, 53s.; tins free; carriage paid. Sample 2d.—CHARTER, Tatlingstone, Ipswich. N 78

NOVELTY.—Picture Postcards of the Beautiful colour-photo engraving of Sladen's "Golden Prolific" and "Extra Golden" Bees. Three for 2½d., 8d. per dozen, post free. Every Beekeeper's Postcard Album should contain one of these.—SLADEN, Ripple Court Apiary, Dover. o 56

OVAL WIRE NAILS.—1in., 4d.; 1¼in. 3½d.; 2½in. 3d.; Panel Pins, best, ¾in., 6d.; seconds, 4d. per pound; 5 lbs., one of each sort, 1s. 6d.; post free, 2s. 2d. Samples two stamps.—S. WRIGHT, Southgate Stores, Bury St. Edmunds. o 19

OWING TO REMOVAL, several good new Frame Hives to clear, 5s. 6d. each.—CUBITT, Trunch, Norfolk. o 40

PRETTY LITTLE (pedigree) YORKSHIRE TERRIER, good colour, 12 months old splendid watcher and clean. Sell 40s., or exchange Bees, appliances, etc.—"T.," 33, Baldslow Road, Hastings. o 42

QUEENS BY RETURN OF POST, reared 1905, healthy, 5s. each.—O. KNIGHT, Epney, Stonehouse, Glos. o 49

RARE BEE BOOKS.—Twenty Vols. "British Bee Journal."—"G." care of "Bee Journal" Office. o 55

SALE, TWO STOCKS, Eight Empty Hives, Section Crates, Feeders, Straw Skeps, etc. Bargain, £5.—75, Netheredge Road, Sheffield. o 29

SEVERAL YEARS OF "BEE JOURNAL" FOR SALE What offers?—SHORT 31, Paistow Grove, Bromley, Kent. o 34

SEVERAL NEW and SECONDHAND HIVES, sell cheap.—PRITCHARD, Wamalong Road, Salisbury. N 74

STRONG STOCKS IN FRAME HIVES, 32s. 6d.; 1905 Queen; guaranteed healthy. Sola Wax Extractor, 10s. 6d. Bicycle, gent.'s, 35s.—W. WOODS, Normandy, Guildford. o 32

Editorial, Notices, &c.

BRITISH BEE-KEEPERS' ASSOCIATION

CONVERSAZIONE.

(Continued from page 142.)

The Chairman, in opening the subject of the "Standard and Other Frames," said that many present did not know how the standard frame originated, nor the reason why the present size of it was adopted. In the early days of bee-keeping, when Mr. Abbott was editor of the B.B.J., he was greatly in favour of bee-keepers deciding on a standard frame. The B.B.K.A. did not feel itself strong enough at that time to formulate a "standard"; different hive-manufacturers making their own sized frames. But at last there was so much confusion that the Association stepped in and determined at one of their meetings that a "standard" for frames should be adopted. The Rev. Geo. Raynor brought the matter up at a *conversazione* in 1882, up to which time there was no uniformity on the point, dealers making frames of all sizes as they chose. The frames used at that time by the principal bee-keepers that Mr. Raynor quoted were:—Mr. Woodbury, $13\frac{5}{8}$ in. by 7 15-16in.; he (the Chairman), $13\frac{1}{4}$ in. by $7\frac{1}{2}$ in.; Mr. Hooker, $13\frac{1}{2}$ in. by $8\frac{1}{2}$ in.; Mr. Cheshire (a Woodbury frame), 13 in. by $7\frac{1}{4}$ in.; Mr. Abbott, a modification of the Woodbury frame; and several others. Mr. Raynor pointed out the advantages to be derived from the adoption of a uniform size, which should be something akin to that selected by the principal honey-producers. The matter was brought up at the annual meeting in 1882, when it was unanimously decided to appoint a committee, who were to meet and inspect all letters that had been sent referring to the subject, and also various specimens of frames that had been submitted for approval. There was a great deal of discussion at that time in the B.B.J., meetings were held at different centres to consider the matter, a number of different sizes were suggested, and American methods of bee-keeping having just got into vogue here, many people wanted to have a frame of the size the Americans were introducing. As a matter of fact, there were twenty or thirty different American frames being used at the time. There were, indeed, quite a number of different sizes of the "Langstroth" frames in use. The committee appointed to study this matter and report consisted of Mr. Abbott, himself, Mr. Cheshire, Mr. Desborough, Mr. Hooker, Mr. Raynor, Mr. Neighbour, and Mr. F. D. Scott. All these gentlemen had brought out hives for using in their own apiaries, and Messrs. Neighbour and Abbott represented the manufacturers. This committee met and considered all the letters of advice and all the frames sent in as specimens, and decided that it would be advisable to fix on the sized frame which was ultimately adopted—namely, 14 in. by $8\frac{1}{2}$ in. The reason was that that frame would just fit most of the Woodbury hives then extant, which were all about $14\frac{1}{2}$ in. wide. Where the hives were $7\frac{1}{2}$ in. deep a little strip added would enable it to be used. The committee also decided there should not be more than $\frac{1}{4}$-in space on each side of the frame. The decision was quite unanimous, although the members of the committee were all using different sized frames at the time. Mr. Desborough, who did not attend the meeting at which the conclusion was arrived at, subsequently sent in his adhesion, and acknowledged the decision to be a wise one. If another size had been chosen a large number of hives (Woodbury's being preponderant) would have been put out of use, with a consequent hardship to bee-keepers generally. Another reason was that those who experimented with large-sized frames (he, the Chairman, was one) had tried the "Langstroth" frame, and found it too large. At that time he had tried German hives, and had a number of different ones in his apiary for all-round work; nevertheless, he came to the conclusion that there was nothing to better the size he finally adopted, which was about the same dimensions as the present standard frame. There were some districts where a large frame would no doubt do well because of plentiful bee-forage and a great honey-flow from it, but in most districts a smaller one was a distinct advantage. They could build up much more gradually with a small frame than a large one. For queen-rearing also, no large frame could be compared with the small one. Three of the latter might be used to make a nucleus without any detriment, whilst it was very extravagant to take a "Langstroth" frame for queen-rearing. For supering, too, colonies could be built up much more gradually, because it was possible to increase the hive to twelve, fourteen, or sixteen frames at will. He had had hives working with fourteen or sixteen frames without chilling the bees, as would be the case with a large frame. When working one hive on top of another one or two frames might be given at a time, and the colonies become gradually increased. He was decidedly of opinion that the present standard frame was good all round. At the time it was selected "wiring" was not in vogue. Since then the practice had come into use of wiring frames for foundation, and he admitted the frame was rather weak

for that purpose, so that unless bee-keepers were careful in stretching the wires, the sides would be driven together and cause the comb to bulge. But in reviewing this question they had to take into consideration the number of hives that were being used, and the advantage the adoption of a standard had been to the bee-keeping industry. There was not the slightest doubt it had given a very great impetus to apiculture. It had in the first place cheapened hives, because makers were not obliged to keep a number of different sizes; then it had benefited customers, because they could always order what was wanted with the certainty of obtaining it. When frames had to be made to order there was always a difficulty in securing the right size. It also enabled bee-keepers to exchange and sell combs that had been used for extraction to others of their fraternity. He himself had bought and sold combs in that way. In other countries where there was no standard frame, people complained very much of the hardship it entailed. It was futile to compare America with this country in the matter of apiculture. In England they worked on entirely different lines. The B.B.K.A. was started with the object of improving the cottager class; there was no suggestion that they should become large bee-keepers, but only that they should take advantage of the pursuit as an adjunct to their ordinary occupation. In America the sole object was a commercial one, namely, the sale of honey. The size of frames there was to a certain extent immaterial, because the bee-master ordered his frames in thousands at a time, so that the maker could supply him at a cheap rate. But in this country the manufacturer could not alter his machinery to suit an order for 20 or 30 hives; it would not be worth his while. He (the chairman) thought he had now made it clear that without a standard frame bee-keeping in England would be more expensive than it was as present. In Switzerland and France the disadvantage of being without some such agreement had been largely felt, and efforts were now being made to secure uniformity in hives and frames. He was therefore of opinion, after much thought and experience, that if anything were done with regard to altering the present standard frame, it should be simply with a view to strengthening the bars. He strongly advocated the retention of the present outside dimensions, but at the same time would be pleased to hear any views on the subject. A number of patterns had been sent in to illustrate the views of different people on the subject. He wished to impress the audience that there was no desire to stifle discussion or invention; as they grew in years possibly they were apt to look upon new inventions as not conducive to the best bee-keeping; but he felt sure that in this, as in every other industry, the simpler the methods, compatible with efficiency, the better. Nevertheless, he was always pleased when people made experiments, so long as they did not pay too dearly for them.

Mr. Lee showed a frame that he had made, the only difference between it and an ordinary standard being that the top-bar was increased to 1 1-16th inch, and the ends reduced to $\frac{7}{8}$-inch, the W.B.C. ends in use being adapted to the improvement. The additional width added strength to the top-bar, and was a preventive of brace-combs. As regarded the sides, it was like the standard frame. The disadvantage in the latter was, in his opinion, the saw-cut. If bee-keepers could be educated to do away with it, the ordinary frame would be much stronger than it was. The bottom-bar of his frame was $\frac{1}{4}$-inch, $\frac{1}{8}$-inch being thought insufficient.

Mr. Overton also exhibited three frames. He called special attention to the wiring, and said many people had no idea of the proper way of wiring.

The chairman produced two frames sent in by Messrs. Abbott Brothers, of similar outside measurements to the "standard." Their improvement consisted in the strengthening and widening of the top-bar and the method of fixing foundations without saw-cut. He (the chairman), had to plead guilty to the sin of the "saw-cut." He was the first to introduce it years ago, but there was a reason then which did not exist now. At that time German foundation was much in use, and the top-part of the sheet was flattened; but the foundation used nowadays was much thicker, so that the saw-cut had been made wider to receive it, which naturally weakened the top-bar to such an extent that it could not be trusted to remain rigid. Two other frames were sent by Mr. Skinner, of Bristol. He produced one, which had a bevel edge on the underside of top-bar, thus adding strength to the latter. In Mr. Skinner's second frame the bevelled edge was in two parts, one being loose, and used for the purpose of fixing the sheet of foundation. Mr. Flood had sent a frame from Reading which was of the regulation standard order, and, the maker claimed, could not be beaten if made of proper materials.

Mr. Pugh thought it would be well for them to disabuse their minds as regarded size. If he remembered rightly there was no suggestion of altering external measurements; the only question was as to the make of the frame. He knew there were people who fancied they had found a frame which would beat the standard (there always were eccentrics about), but as 99 out of 100 were satisfied with it, bee-keepers were, he believed, unanimous that it was

not worth while to alter the size. They could, however, discuss the top-bar, the side-bars, wiring, or anything else short of that.

The Chairman inquired if there was any advocate of the large-sized frame present. No one responded, and Mr. Cowan went on to observe that there had been letters to the B.J. on the subject, but nothing at all advanced which would prove its superiority. The subject was thoroughly considered twelve months ago, and they were now going over exactly the same ground; nevertheless, the assembly would be glad to hear the views of anyone who had had experience with large frames.

Mr. Pugh moved:—"That this meeting, feeling satisfied with the present standard-frame, decides that no alteration whatever in its external measurements is advisable."

Mr. Reid, feeling himself partially responsible for this discussion, said he had in mind only one thing. It had never occurred to him for a moment to question the size of the standard-frame, but his contention was that the manufacturers had departed from the original frame to the extent that the construction of the shoulder had been weakened. He found in apiaries, especially if there was much propolisation, that the ends often broke. Judging at the "Royal" Show, he had noticed that the frames were far too weak. The point was how they could retain, if possible, such advantages as the saw-cut gave and still maintain the top-bar at its full strength. One fact he was grateful for was that they had had a lucid explanation of the history of the standard-frame which no one could have obtained anywhere else. He personally was much indebted to the chairman for it. He did not doubt that apiculturists generally in this country were satisfied with the dimensions of that frame, while as regarded its construction there were differences of opinion, and many minds were at work studying the subject. Bee-keepers must welcome everything that came. He thought they might have a stronger wood used in making the top-bar, which would not add to the cost of the frame. He had made them of teak, which was excellent, but possibly a little more expensive. The difference, however, was not very great on 100 frames. He had much pleasure in seconding the motion.

The resolution was carried unanimously.

(Conclusion of Report next week.)

HONEY IMPORTS.

The value of honey imported into the United Kingdom during the month of March, 1906, was £3,106.—From a return furnished to the BRITISH BEE JOURNAL by the Statistical Office, H.M. Customs.

Correspondence.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

AMONG THE BEES.

THE ROLL-CALL.

[6278.] Reports lead me to infer that there will be a considerable drop this spring in the number of hives compared with the total put up in winter quarters. In the North, October and November were very wintry, while February and March were duplicates. The first period picked out the weaklings and reduced bees to such an extent that they were simply snuffed out before the arrival of spring weather when anything could be done for their welfare. In my own case instances of this kind manifested themselves, and driven lots of last season went to the wall during the later winter, bees, as a rule, having dwindled to such an extent that they could not survive. Otherwise, the merry hum about the hives since the advent of April is a perfect pleasure.

A "Tip."—One weak lot was attacked by robbers before I noticed it, and the marauders had got such a taste of stolen sweets that I feared, if I closed up the hive, that they would at once devote their unkind attentions to neighbouring colonies. So I used that hive for giving some stimulative feeding, pouring warm syrup into the empty combs. After a day of this I thinned down the "feed" gradually until it was only sweetened water, when the robbers desisted, evidently disgusted with the poor bill of fare.

Spring Observations. — Early in the season I was able to spot my weaklings and diagnose which were the strong colonies by outside observation. During the snowstorm all the strong ones were able by the heat evaporated to melt the snow for some distance from the hives, while with the weak ones it lay tight in to the wood. Further, a considerable space was found in front of entrance in the shape of a tunnel where the powerful colony existed. About the last days of February, during a mild day, a pleasant cleansing flight was got, and a considerable rearrangement of stores took place. The amount of small fragments of wax cappings thrown out was a fair index to the strength of the colony. During the first half of April grand bee weather has allowed an excellent start to be made with breeding. Pollen has been carried in steadily, and the number of bees seen at every small rivulet or ditch was a marvel.

Making a Start.—As many will be joining the ranks in a few weeks, it may be well to state that during April is the best time to start bee-keeping. Earlier on, especially if there is to be any shifting of the hives, is inadvisable, as the commotion caused by the movement stirs up the bees to a state of excitement which acts to their detriment. Stocks once roused up are agitated, and fail to recover the close clustering which is their natural state in cold weather, so they prematurely start active breeding, and levy a heavy drain on stores. This leads to spring dwindling, and sometimes a collapse of the stock roused out of due season. On the other hand, stocks shifted during the latter part of April undergo the amount of disturbance which just rouses them from their lethargy, and, if weather is propitious, start not only breeding, but active foraging in search of the honey and pollen now to be found in at least small quantities in many flowers blooming in spring. If the stocks are to be shifted only a short distance an early date may be best, so that, as a consequence of the change, no bees may be lost by seeking their old landmarks. If, however, they are to be transported beyond a bee's flight, late in the month is best. Then they at once mark their new location, and forage freely in discovery of every source of nectar. Something in the change often animates the stock to special effort, bringing about an energy which secures them a first place in the apiary. This phenomenon is a very noticeable event frequently observed and commented on.

In connection with this subject of moving bees in spring, I have come to the conclusion that they can be shifted to any distance over half a mile with little or no precaution, because at that season bees forage only near their hives. Until they begin to take distant flights they adapt themselves to any new location without any question. Last May I knew of six hives being shifted a bare half-mile, but the new surroundings were thoroughly dissimilar. Not a bee returned to the former site. On several other occasions I have information to a similar effect, convincing me that until May little danger may be apprehended.—D. M. M., Banff.

QUEEN WASPS.

[6279.] May I be allowed to draw the attention of bee-keepers to the fact that now is the time to hunt for and destroy queen wasps? Every wasp now killed means a nest less later on. They are to be found on the buds of fruit trees and on pieces of old board, nibbling the fluff off wherewith to build their nests, and can be detected by their lazy hum as they flit from bud to bud. They are rather shy and not easily killed, or rather knocked down, with a plain board, as the air which the board drives in front of it seems to carry or blow the insect away from the direction of your stroke, and it escapes. To overcome this I last year invested in a sixpenny butterfly net, and with it netted thirty-six queens; a gardener near at hand also bagged thirty. They would come into the greenhouse in which he was working, and when seen he would close the windows and easily capture them, so that between the two of us we reduced the number of nests by sixty-six last season. This year, at this early stage, we have secured forty-seven, my "bag" being twenty-six. In districts where wasps are plentiful it would pay to hunt them. I have not been saving those I captured, but it has occurred to me that last year one of your readers advertised for "dead queens for scientific purposes." If these are any use to him I shall be pleased to send on any I may get if he pays postage.—D. G. Taylor, Ilminster, April 14.

NOTES FROM AMONG THE HIVES.

[6280.] Spring has arrived! Bright sunny days have succeeded the prolonged period of gloom, and the hum of the busy bee is heard in the land.

In several cases, however, the bee-keeper has been disagreeably surprised to find a number of his hives veritable cities of the dead, tenanted only by pitiful corpses, their very attitude as they died imploring food—a mute reproach to the procrastination of the owner who *thought* his stocks would pull through to spring.

The early closing of an otherwise excellent clover season, followed by a total failure of the heather crop, left stores very low, and the mild open winter made things worse, so that uncared-for stocks were in bad shape to face the extremely severe weather that prevailed throughout February and, to a less extent, during the following month.

Personally, I took care to feed extra well before closing down and have no belated regrets to express on the subject. All came safely through the big snowstorm and keen frosts of February, with one exception, and are now in excellent condition. This was one of two small lots—mere nuclei that I had allowed to stand over winter. Examination showed one with brood on two frames and running short, while the other was queenless but had plenty of stores. Prompt uniting put things right on both sides.

Just to be sure I had a look under the quilts and found every stock but one with an abundance of sealed stores. The lean

colony thereupon had two of its lean combs exchanged for fat ones from a wealthy neighbour.

No syrup or candy has been given as yet.

The only type of feeder I have in use this spring is an extra heavily-stored shallow or standard brood-box placed on top of original frames last autumn. This style of wintering is quite the opposite of the usual coddling system which involves contraction in autumn and again in spring. The present condition of these double-storeyed colonies is far ahead of those left in the usual way, while the one colony which I wintered in three storeys on the equivalent of forty standard-frames has left the rest hopelessly in the rear.

For the benefit of those who have got the impression that foreign bees are prone to pine and die in our northern climes, I may mention that these particular bees are Italians.

I should like doubters to see the clouds of foragers that come bustling in on favourable days, their trouser pockets bulging with many-coloured food for the rising generation.

A colony of Carniolans is also deserving of special mention. The terrible experience I had with this variety during a former season, when they seemed at one time to be swarming every day and several times a day, did not deter me from giving them a trial during 1905.

All went well until the closing days of August, when the sight of a heap of dead and dying queens at the hive entrance suggested that Carniolans had swarmed—and gone. Examination, however, showed that the bees were innocent on that score, but it was evident that the queen had met with some mishap and a plenitude of successors had been reared in her place. I was too late to save any of them; and, indeed, had grave doubts as to the survivor getting mated, the weather being most unfavourable. However, by feeding steadily through September the colony was kept active, and the outside combs as filled being replaced by empty ones, I was enabled to double for wintering. Eventually the queen got mated, started laying, and must have kept on without a halt, for the colony from being comparatively weak in autumn is now very strong and carrying in pollen at a great rate—second only to the Italian stock.

All other stocks are in better condition than ever before — just through proper autumn attention. As a result of letting the bees do their own spring management I have been free from the trouble associated with the use of bottle-feeder and candy-cake, to say nothing of the domestic "trouble" which the preparation of the latter article at the kitchen fire brings down on the head of the poor bee-man. Moral—"Go, thou, and do likewise."—J. M. Ellis, Ussie Valley, April 16.

ITALIAN BEES IN SOUTH AFRICA.

SUCCESSFUL IMPORTATION.

Mr. C. B. Simpson, Government Entomologist, writing in the *Transvaal Agricultural Journal*, says:—"I am glad to report that this Division has at last succeeded in importing Italian bees into the Transvaal. Mr. C. E. Legat, the Conservator of Forests, brought out these insects from Mr. E. H. Taylor, of Welwyn, England. Six full colonies were consigned in specially constructed hives, each containing three shallow-frames full of honey. In addition to these, three queens with a small number of workers were brought out in mailing boxes. Only one of these small boxes, which had been ordered for Mr. Cairncross, of Cairncross and Zillen, arrived with the bees alive.

"Upon arrival at Pretoria the hives were opened, in order that the bees should get a cleansing flight and that the hives might be cleaned out. It was found that only a small portion of the honey had been consumed; in some cases one half of a frame, and in other cases that from a whole frame. Three of the queens had laid eggs, and there was a small amount of brood in each of these hives. The bee moth or wax larvæ were found in four different hives, but great care was taken that this pest was destroyed. One hive was especially weak, there being left only a dozen or so workers which survived with the queen. Unfortunately, the South African bees began to rob this hive, and not only killed the few workers, but also the queen. After the arrival of these bees at Pretoria they were placed in standard hives and strengthened by the addition of brood from the South African hives. The five surviving colonies seem well satisfied with their new environment, and at the last examination had a great amount of brood; and it seems that the importation has been an unqualified success.

"On account of the possibility of importing foul brood into the Transvaal, the hives in which the bees were transmitted were carefully disinfected, and are isolated far from other bees, and are practically being kept in quarantine until I am quite satisfied that foul brood is not present.

"I have written to many of the prominent bee-keepers in the Transvaal asking for suggestions as to how these Italian bees might be best distributed throughout the Colony. It is highly essential that the strain be kept pure, and with this object in view it has been decided that for some time to come nothing but swarms with fertilised queens should be imported. As

these bees are being kept in quarantine, it is our wish to strengthen them in order that they may pass the winter safely. We shall not be in a position to distribute swarms until about next August or September, but we will, however, receive applications for these swarms at any time. We have not yet decided on the price of these swarms, but it will be practically cost price."

[We reprint above, by request, from *The Transvaal Advertiser*, March 14, 1906.—EDS.]

WEATHER REPORT.

WESTBOURNE, SUSSEX,
March, 1906.

Rainfall, 1·53 in.	Minimum on grass 21° on 23rd and 30th.
Heaviest fall, ·28 in. on 10th.	Frosty nights, 9.
Rain fell on 20 days.	Mean maximum, 46·6.
Below average, ·59 in.	Mean minimum, 34·8.
Sunshine, 120 hours.	Mean temperature, 40·7.
Brightest days, 28th 11·1 hours.	Below average, 1·4.
Sunless days, 7.	Maximum barometer, 30·47 on 3rd
Below average, 24·2 hours.	Minimum barometer, 29·36 on 12th.
Maximum temperature, 57° on 7th.	L. B. BIRKETT
Minimum temperature, 24° on 30th.	

Queries and Replies.

[3256.] *Bad Luck with Bees.*—I restarted bee-keeping last year, after an interval of a good many years, and have been most unfortunate. Will you in your valuable journal suggest what has been wrong with my methods, in order that such bad luck may not continue, as I am more determined than ever to succeed. My first swarm, sent from the country early in July, came to hand with nearly all the bees dead and all quite sticky, evidently smothered. A fortnight later a cast with fertile queen was hived all right on five frames of foundation, and did fairly well, being fed with medicated syrup from "Guide Book" recipe. In September I bought 6 lb. of driven bees, hived them on nine frames of foundation, and fed rapidly up as directed, both lots being well supplied with stores by end of the month, and packed with a cake of candy over the frames and cork dust quilts. Last week on examining the hives I was much annoyed to find the bees in both dead, there being only a couple of handfuls of bees in each, but still two or three frames of stores. The sugar I used for syrup was Glebe No. 1 granulated, guaranteed pure cane sugar, although one lot seemed to have a slight blue tinge when made into syrup. This makes me ask: 1. Can the sugar have been at fault? Or has it been the season? There has scarcely been a week all winter that the bees have not flown on one or two days at least. I noticed a good many bees crawling on the ground outside, and when lifted up and put into the hive they just crawled out again and dropped on to the ground and died. I have other two stocks which were at the heather; they did not need any feeding, and are doing well. 2. Would it be safe to give the combs with stores from the two dead lots to them this spring? I read with great pleasure your two papers on bees, and trust that you will from this account be able to tell me what is wrong? I enclose name for reference.—PORTOBELLO, April 4.

REPLY.—1. With regard to the general question of your unfortunate restart with bees, and the bad luck that followed, it goes without saying that the first mischance was entirely due to bad packing of the swarm by sender, as the bees had not sufficient ventilation. It would also have been well to remember the adage telling of "a swarm in July" not being "worth a fly." This applies with double force to the "cast" hived at the end of that month, seeing that it would probably consist of a small lot of bees, while the honey season was nearly over when hived. Had you procured a good swarm in June from a reliable bee-man the result would, no doubt, have been different. The "cast" hived at end of July—when the honey season was about over—had a poor chance of becoming well established, seeing that "casts" so late in the season usually consist of a few bees headed by a young queen that has hardly time to get mated and start breeding before the year's work is ended. In this way your chance of success was considerably reduced at the outset. 2. There is no reason to suppose that the sugar used had anything to do with the mischief, but the chances of safe wintering would be greatly reduced if the food was not sealed over. There will be no risk in giving frames of comb containing the syrup to your other stocks if they are short of stores.

[3257.] *Queen Cast Out after Uniting.*—1. Will you kindly inform me through the pages of your valuable journal if the enclosed queen (which appears to me a very small one) has been fertilised? 2. On looking through a lot of driven bees a few days ago I could neither find queen, brood, nor eggs, and naturally concluded that no queen was present. I therefore united them to the next stock (also a driven lot). But on going round the hives this morning I was surprised to see a small

cluster of bees on the alighting board, and on examination found the enclosed small queen, so concluded that there must have been two queens, and this one has been killed by the other. Kindly say if you consider my inferences correct. — F. Evans, Market Drayton, April 7.

Reply.—1. The queen sent, though rather small, is not abnormally so, seeing that she had not started to lay, and the size increases after having begun her maternal duty. It is also never safe to assume queenlessness in March because no brood is found. 2. There is no doubt that the dead queen found has been killed either by the mother-bee heading the colony to which the first-named lot were united, or by the bees of the second lot; most likely the latter, as they would strongly resent the intrusion of an alien that had not started laying.

[3258.] *Queen Cast Out in Spring.*—About noon yesterday I noticed some scores of dead bees on the alighting-board and on the ground below one of my hives, while the live bees were rushing about just outside in an excited manner, and I at once feared they had lost their queen, and were short of stores, so I slipped a few pieces of candy under quilt and sprinkled a little syrup down among combs as well as I could without uncovering the frames more than I could help. They were rather short of food, but the quilts were very warm. This latter fact, I thought, was a proof of all being well inside. 1. Am I right in this idea? I then looked more closely amongst the dead bees, and discovered the enclosed queen on the ground below the alighting-board. I brought her indoors, and she revived sufficiently to crawl a little, but did not seem able to take some syrup that I had dropped near her. This morning she was dead. 2. Can you please tell me the cause of her death, as well as that of the other bees? A friend examined the hive to-day and found two patches of brood and plenty of young bees, which seem to be quite strong. 3. Will the bees be likely to raise a queen from this small quantity of brood found on one frame only? There may be more brood, but it was too cold to take out all frames; only the three centres ones were removed. Will you kindly advise me what to do? 4. More than a week ago I found outside another hive a drone nearly dead. What does that mean so early? I send name, etc., and sign—Novice, Colchester.

Reply.—1. You are quite right in supposing that the warmth of quilts above brood-nest indicates prosperity below, but in your case the "warmth" was caused by the abnormal excitement among the bees at loss of their queen. This would have been clear to one who had any experience of bees. 2. We can only guess at the cause of queen being found outside the hive, as there is little to guide us in details given. She may have dropped off comb on to the floor-board among the other bees when they were changing position of cluster in moving nearer to the food stores, and—being too chilled to regain her position on combs—have crawled outside, only to fall on the ground below. Anyway, it is apparently not a case of superseding the mother-bee and raising a successor, or queen-cells would have been started. 3. If eggs, or brood of suitable age, was left in combs at the time queen was found, you will probably find queen-cells in progress. 4. Normal drones at this season means prosperity, while abnormal drones indicate queenlessness.

[3259.] *Candy-making.*—Though I have so recently asked some questions, will you please help me again in a difficulty with candy? I send a sample, and should like to know what fault I have committed in making it. Bees eat it, but it dries too soon, and seems coarse in grain. Most of my candy is like this; but some, made apparently in the same way exactly ("Guide" recipe) is much more buttery and nice.—B. Lines.

Reply.—Candy as sample will do fairly well for present consumption, but so soon as the watery moisture dries out it will become hard as stone, and useless to the bees. We often wonder at the varying results achieved by different persons in carrying out the directions for making soft candy in the "Guide Book," some makers sending excellent samples, while others completely fail. In your case, however, there must be some variation in procedure or the candy would not be good at one time and bad at another.

[3260.] *Re-queening Stocks.*—I got a first swarm of bees early in June last year and put it into a new hive holding ten frames fitted with full sheets of foundation. The bees filled the body-box, and I also had 20 lb. of clover honey and 18 lb. of heather honey in sections from it. The stock has wintered well, and the bees now cover eight frames. They have been working very busily this past fortnight. Would you please say in the B.B.J. if I should keep this queen another year in the event of the hive swarming? 2. To what age should queens be kept?—I send name, etc., and sign—Inchcape, Arbroath, April 11.

Reply.—1. If the stock continues to make such progress as at present we should let well alone, and not trouble about re-queening at all this year. There is no absolute certainty that the queen was hatched in 1904, as supposed. 2. As a rule, it is well not to keep queens beyond their second

year, but it is a truism that every rule has its exceptions.

[3261.] *Transferring from Skeps to Frame-hives.*—I have three skeps of bees which I am anxious to get into frame-hives. My idea is to set each skep on top of frames and let them work down into the lower hive and make a home therein. Will you, therefore, tell me: 1. What is the best time to do this; is it too early yet? 2. I have also some candy left over; is it too late now to give bees candy as food? A reply through the B.B.J. will oblige. I send name, etc., and sign—A SUBSCRIBER, Suffolk.

REPLY.—1. The skeps may be set on as proposed as soon as sufficient bees are seen to cover the lower edges of comb when the skep is raised from its floor-board. The present month is the most suitable time for operating if found in the condition named above. 2. Candy may still be given for stimulating purposes if food is not very short indeed; but syrup food is more suitable at this season, and where stores have run out the latter must be given, or the bees may perish from want.

[3262.] *Queen-mating.* — I have been unable to keep my Ligurian stocks pure, and shall be glad to have your opinion whether by letting loose in a large public hall six pure virgin Ligurian queens along with, say, thirty pure Ligurian drones I should secure the fertilisation of the queens and so secure the purity of breed? —I send name, etc., and sign—M. K. A., Spalding, April 8.

REPLY.—There will not be the smallest chance of securing the desired end by the plan proposed.

[3263.] *Getting Shallow-combs Built Out.* —1. Will you kindly tell me the best way to get some shallow-frames of comb drawn out ready for use this season? I only started bee-keeping in March last year with one stock, and now have seven colonies. My idea is to put a box of shallow-frames, fitted with full sheets of foundation, above the brood-frames, and by using a feeder on top of the shallow-frames stimulate the bees to draw out the combs in latter. I therefore ask: 1. Will this plan succeed? 2. How many brood-frames should be given to a swarm weighing about 3 lb.? 3. Which do you consider the best extractor in the market? Your replies will much oblige.—W. JEPSON, Barnsley.

REPLY.—1. Your plan will fail in securing the desired result, because the bees would simply carry the food given down into the brood-nest. The way to get combs drawn out for use as stated is to follow the directions given on page 113 of "Guide Book" under the heading "Feeding to Produce Combs." 2. Three pounds of bees should not be put on more than four frames of foundation. 3. We cannot recommend any special extractor as better than others without doing injustice somewhere. Any leading dealer will supply a machine proved to be good and efficient by its success on the show-bench.

[3264.] *Instructions for Beginners.*—As a regular reader of the B.B.J., it occurs to me that if you could give in it a kind of weekly instruction column it would be helpful to beginners like myself. In this connection, I may say, last year my bees seem to have swarmed on the alighting-board; at all events, they clustered there for two or three days running, and so I ask: Would that be a false swarm? The bees appeared to go back into the hive each night. I have what are called non-swarming hives.—I send name, etc., and sign—W. G. T., Kent.

REPLY.—The first "instructions" we invariably give to beginners with bees is to procure a reliable "Guide Book" on the subject. Without such help it is like groping in the dark. We are also careful to impress on beginners that it is impossible to teach the art of bee-keeping in our Query and Reply column. All we can do is to give advice in cases where unforeseen difficulties arise which are beyond the skill of novices; but there are many things that cannot be done by rule of thumb, nor is it possible to frame instructions that will meet all cases, seeing that "bees do nothing invariably." In reply to our correspondent's query *re* swarming, there is no such term as "false swarm," but the common term for clustering on alighting-board is "hanging out," caused by want of ventilation in warm weather. Then, with regard to non-swarming hives, it has been aptly—and perhaps truly—said that "beginners cannot use them, and experienced bee-men won't."

Echoes from the Hives.

Rose Farm Apiary, Chesterfield, April 9. —After a rough and stormy March, April came in somewhat milder. Monday, the 2nd, was warm and sunny, a genuine bee-day, so I ventured on a first spring examination, and found all my thirteen stocks alive, and all but two had plenty of stores to last them well on into May. The two exceptions were soon put to rights by giving them spare combs of honey left over for the purpose. Eight of the others had good patches of brood on three combs, and the remainder on three frames, while a nucleus lot, with only a few bees to keep a spare queen alive, had a patch of brood as big as my hand on one comb. The bees

have been very busy on the willow palm and the coltsfoot for a week past; indeed, it has been like summer here, although very cold at night. I venture to say, however, that there will not be much honey-gathering done in our district on this side of June 21 this year, the wind having veered into the wrong quarter since Lady Day.—Tom Sleight.

Bromley, Kent, April 9.—I find that the cold weather in March caused the queens in my stocks to cease laying, after having begun early. In some cases they stopped entirely, but during the last week or ten days they have started again in real earnest. Looking through one of my hives on Saturday, on one frame I found a full-grown drone, and tried to catch him, but he flew off the comb quite strong on the wing. The hive in question is headed with a queen mated the first week in August last. She is laying quite fast now. The hive next to it has also a young queen, and this stock had just about the same amount of brood as the first one, although I saw young bees and brood in all stages on January 26, and the former queen did not begin to lay until the end of February.—J. C. S.

Tring, Herts, April 4.—Bees in this district appear to be doing well, judging by ours, which are building up wonderfully. All colonies contain good patches of brood in all stages, and brood-nests are rapidly increasing. Queens of stocks with only a moderate supply of stores on hand, are being stimulated by slow feeding, while those well supplied are kept going by uncapping honey at intervals. For some days past we could not help noticing the unusual amount of activity about our hives, the bees labouring from sunrise to sunset. We attributed this to the splendid weather conditions prevailing, but the key to the mystery was found this morning. Bees were busily flying forth as early as seven a.m., and, later in the morning, having noticed that all of them were going in one direction, determined to follow the line of flight in order to discover the attraction if possible. We soon found they were passing into glass houses situated a short distance away, and on entering several of the latter the bees were seen busily at work on the fruit bloom of various kinds, such as apricot, nectarine, peach, cherry, plum, etc. The man in charge of the houses informed us that the bees had been visiting him in thousands for several days past, and that it was saving him a lot of labour, as otherwise he would have to fertilise the blossom by means of a brush. And so the little labourers are pleasing both parties! We consider ourselves very fortunate in having bee-forage near us so early, as it is building up our stocks very rapidly, and we shall prepare for some early swarms. Wishing all brother bee-keepers a prosperous season—A. J. Howlett and F. J. Tompkins.

Notices to Correspondents & Inquirers.

Letters or queries asking for addresses of manufacturers or correspondents, or where appliances can be purchased, or replies giving such information, can only be inserted as advertisements. The space devoted to letters, queries, and replies is meant for the general good of bee-keepers, and not for advertisements. We wish our correspondents to bear in mind that, as it is necessary for us to go to press in advance of the date of issue, queries cannot always be replied to in the issue immediately following the receipt of their communications.

*** The Chapman Honey Plant.—A correspondent, dating from Lowestoft, April 10, writes:—"Could you tell me where I could get some young plants of the Chapman honey plant, as I presume it is too late now to sow seeds for blooming this year?" Perhaps some reader will kindly help us in replying to the above.

K. H. (Stretford, Manchester).—Bee Parasites. — The insect on bee sent is the *Braula Cœca*, or blind louse. It is fully described and illustrated on page 160 of the "Guide Book." If only very few bees are troubled with parasites, and the queen is free from them, no great harm will follow; otherwise, you have just cause of complaint against the dealer who supplied the stock.

T. C. M. (Surrey).—Bee Nomenclature.—The bee sent is an adult queen.

F. A. P. (Thornton Heath).—Transferring Bees.—Comb sent contains nothing worse than honey and pollen, and only very little of the latter; so it is not "pollen clogged." We hope the bees dealt with last month will get on all right, but it was certainly not judicious to transfer old combs and bees from the skep to a frame-hive in such cold weather as prevailed during last month. In fact, the old practice of transferring as done by yourself is now generally discarded for better methods.

Flower Seeds (S. Wales).—Planting for Bee Forage.—With regard to the main point you raise, viz., providing bee-forage in the location whereon you propose to start bee-keeping, we must say that it will not pay to have to provide suitable forage for honey production. The bee-man's harvest should be ready at hand for his bees to collect from the fields and orchards around. On the other hand, it is an undoubted advantage to provide a little early pasturage by sowing seeds mainly for early pollen where such is not available in the neighbourhood, as it stimulates the bees to early brood-raising and thus helps to get them in

trim for the main honey flow from white clover, etc. You may obtain a list of suitable bee-flowers by applying to Mr. Geo. Rose, Gt. Charlotte Street, Liverpool.

B. R. (Sheffield).—Open-air Feeding.—If the nearest bees to your own are located a mile away it should not be difficult to adopt open-air feeding, if done only on fine warm days and not begun too early or continued till too late in the afternoon. The syrup must be medicated and made much thinner than that for ordinary use. It should also be given in shallow dishes placed in warm, well-sheltered corners in the full sunshine, so that the bees may not become chilled while filling their honey sacs with the food. They must also have some dry material to stand on while taking the food, such as straw cut into very short lengths; small bits of cork will also give a dry foothold. We like to set the dishes on old newspapers or any such clean material, free from dry earth or soil, which adheres to the bees legs after feeding on the sticky syrup and renders them incapable of rising for the flight home.

"MEDE" (Leicester).—Soluble Phenyle.—The advertisement of firm who prepare this valuable disinfectant appears in "Guide Book," which you already possess.

Suspected Combs.

J. W. L. (Portinscale). — In one of the three sealed cells cut from an old comb we found traces of foul brood. The other two being entirely empty.

D. M. (Bridge of Allan).—The three bits of old black comb sent are quite unfit for use in diagnosing disease therein. The contents of the few sealed cells seem to have been dried up and gone for years. Why not send a sample containing fresh, soft larvæ?

K. C. (Andover).—There is nothing wrong with comb sent. The sealed cells contain honey only; nor is there any trace of brood in the cells, either foul or otherwise.

MR. WATT (Launceston). — There is no disease in comb sent; in fact, it contains nothing but honey and pollen. Some help from the county expert with regard to bee-management is very desirable in your case, as what you have done through inexperience has no doubt caused the loss of a stock of bees. Write to Mr. John Brown, Polyphant—he is the county expert, and will no doubt advise you.

*** *Some Letters, Queries and Replies, &c, are unavoidably held over till next week.*

Special Prepaid Advertisements.

Twelve words and under Sixpence; for every additional Three words or under, One Penny.

Advertisements for current issue must be received by first post on Tuesday.

AN EIGHTY STOCK APIARY FOR SALE, including new store house and everything necessary; situated on Cotswold Hills, near Junction Station and comfortable hotel. Particulars forwarded.—"APIARIST," "B.B.J." Office, 8, Henrietta Street, London, W.C. o 54

A PRONOUNCED SUCCESS.—The BURKITT BEE-GLOVE. With sleeves, 3s. 6d. per pair, post free. Without sleeves, 2s 6d. per pair, post free. The best, cheapest, and most satisfactory glove for bee-keepers.—EDWARD REYNOLDS, Glove Maker, Andover, Hampshire. Wholesale prices to the trade.

BEES, HYBRID CYPRIANS, good tempered, excellent workers. Stocks. 20s.; smaller, 15s.—WOOSNAM, Haytor, Newton Abbot. o 46

CHAMPION "NEVER SWARM QUEENS" of 1905, in introducing cages, 7s. 6d.; Nuclei with Queens of 1905, five Standard Frames, comb, and brood, 15s.; guaranteed healthy. Begin now with "Never Swarm System," 11 years' absolute success, 3½d.—HARRIS, Wavendon, Bletchley, Bucks. o 14

CLOVER HONEY, 56s. per cwt. Sample 2d.—A. J. NOYES, Pewsey. o 28

EXPERIENCED BEE-KEEPER will take gentlemanly youth, to instruct in bee-keeping in return for his help; no premium. He would be required to reside with advertiser at arranged reasonable boarding terms.—"X. Y. Z.," "B.B.J." Office, 8, Henrietta Street, London, W.C. o 65

FOR SALE, Edison Bell GEM PHONOGRAPH, almost new, with 42 selected Records, mostly Scotch, £3 10s.; or exchange for May-June healthy swarms.—WM. ARTHUR, Bee Appliance Dealer, Alloway, by Ayr, N.B. o 17

FOR SALE, an OUT-APIARY, together or separately, ten splendid Stocks of Bees, in "W.B.C." Hives, all young Queens, hive for queen rearing, supers, miscellaneous stocks, and bee house, complete, all in best condition, and guaranteed free from disease.—H. FIRTH, Rock Park, Birkenhead. o 5

FOR SALE, SIX DOZEN SECTIONS, finest Clover Honey, 8s. dozen cash.—DOBSON, 10, Harlow Road, Lidget Green, Bradford. o 30

FOR SALE, guaranteed healthy STOCKS of BEES, on Standard Frames. 1905 Queens, £1 each; box 1s. extra, returnable. Inspection invited.—ROWLAND, Cliff, Holbrook, Derby, Expert to the Derbyshire B.K.A. o 45

FOR SALE, "LITTLE WONDER" HONEY EXTRACTOR; good as new; not much used; 8s.—KNIGHTS, Hunstanton. o 68

FOR SALE, STOCK, in Taylor's non-swarming hive, 25s.; three Skeps, 12s. each; all healthy. Following articles never used:—"W.B.C." Knife, 2s.; Section Block, 9d.; Guide Book, latest edition, 1s.; Tap Strainer, 9d. Deposit if required.—DARLINGTON, Charing, Kent. o 66

FOR SALE, owing to removal, FIVE STOCKS healthy BEES, from £1 upwards.—E. ASQUITH, Farnham, near Knaresborough, Yorks. o 62

FOR SALE, HIVES, clean and healthy, in good condition, complete, 6s. 6d. each.—ALFRED HALL, Many Pitts, Marton, Blackpool. o 61

FOUR NEW "W.B.C." PATTERN HIVES, 12s. 6d. each.—PRITCHARD, Wamalong Road, Salisbury. o 37

GERANIUMS, best sorts, autumn struck, 1s. 3d. dozen; post free; cuttings half price.—WARBOYS, Milton, Weston-super-Mare. o 60

Editorial, Notices, &c.

BRITISH BEE-KEEPERS' ASSOCIATION

CONVERSAZIONE.

(*Continued from page* 153.)

The Chairman invited anyone present to make suggestions with regard to altering the construction of the top-bar. They were unanimous about the outside dimensions, but what about the inside?

Mr. Weston advocated the abolition of the saw-cut, and the use of a groove in which to place foundation, which could be fixed in with a little melted wax. That would allow of the frame being much stronger, and get rid of the pest of the wax-moth, which found its way into the saw-cut, and between that and the quilt.

Mr. Belsham said Mr. Abbott had always made the frames he used. They were constructed with a groove in top-bar for fixing foundation with molten wax, and a groove in side-bars. He had never yet found the top-bar sagged nor broken. He thought the groove on the sides a great help. The top-bar was the same thickness right through.

Mr. A. W. Salmon said with regard to the "Gayford" frame — which had been shown—that it possessed a strong top-bar without the groove, but the extra thickness reduced the cell space of the comb slightly; but it surmounted the difficulty of the wax-moth in the top-bar, and secured substantial comb well built out without the necessity of wiring the frame.

Mr. Boxwell said the "Gayford" frame just referred to was not new, it being known many years ago. It had a top-bar about 1in. thick. This was cut underneath in half and had a loose piece about ¼in. square, which could be taken out, after which the foundation was inserted and secured, and the cut-out piece put back again into its place. The foundation was held firmly, but the inside size of the frame was reduced.

Mr. Reid referred to the proceedings of the last conversazione in October, 1905, when it was agreed that the top-bar was weakened by the saw-cut running into the part where the two ends of the side-bars caught the top-bar. The difficulty was to make the cut in top-bar with a circular saw. Previously the manufacturers in America did not cut the top-bar as far as where the side-bars reached it; therefore a piece had to be cut out of the foundation to correspond with the slanting cut that was left. This was complained of by bee-keepers, who were thus obliged to cut slantingly further than they needed. Mr. Cowan said the difficulty could be got over by using a much smaller circular saw than those generally in use, but it was found impossible to make the cut direct because the part of the machinery on which the circular saw rested could not be brought into position so as to let the centre part of the saw cut straight. He (the speaker) regarded it as highly satisfactory that steps were being taken to improve what was an obvious defect in the making of frames. The length of the slant could be reduced at the end by using a circular saw of somewhat smaller diameter; the angle would then be made steeper.

The Chairman showed another frame, sent for the opinion of the meeting, which in appearance resembled a Hoffman frame. As would be seen, it had winter-passages cut in the top-bar, which to his (the chairman's) mind was not necessary for ordinary use; such passages being only wanted in the winter. The top part of this frame was close ended. He had considerable experience of such frames, and did not wish to have anything more to do with them. The bees propolised those wide ends, about three inches of the surface becoming propolised, and when an effort was made to take the frames out they were found to be stuck together. He knew the Americans did not care whether they killed the bees or not, their sole object being to save time and make money; but in England bee-keepers advocated humanity, and the thought of squeezing bees within the frames indiscriminately was repugnant to them.

Mr. Overton said that it had always been the object of the association to assist the working classes by advocating the most simple appliances for use so long as they were effective, and therefore care must be taken not to recommend any frame that would be costly. A cheap frame was indispensable. The saw-cut had many disadvantages, although it offered great facilities to the amateur for fixing his foundation. "Wiring," however, was the most useful means of effectually securing combs within frames. He suggested a frame with a slightly thicker top-bar, but in no case should it be wider than ⅞in. He thought the saw-cut should be done away with, as it undoubtedly weakened the top-bar.

Mr. Carr agreed with Mr. Overton's advocacy of the need for cheap and simple frames. Some excellent ones had already been submitted to the audience that evening, each of which would ensure the desired object; and he would be glad to know what was the cost of the two he had selected.

Mr. Abbott replied (regarding his own exhibit) 1s. 6d. a dozen, or 18s. a gross—with the double groove.

Mr. Lee said his frames were 1s. 4d. a dozen, or 10s. per hundred. They were the same price with a groove or with a

saw-cut. The specimen he exhibited was not a new frame, but had been made by his firm and used by some of the largest bee-keepers for years past. He found that each year the sale for frames without saw-cut increased.

The Chairman said that a number of specimen frames had been submitted for approval to the committee, and it would be better for them to examine and test them before pronouncing definitely as to the best one. The outcome of the debate showed that there was no necessity to alter the outside dimensions of the present standard frame, but that the committee must confine their attention to the thickness and width of the top-bar; and that would go forth as the view of those present that evening. The committee would meet and give their best consideration to all the letters and models that had been sent in.

Mr. Reid next mentioned a little matter of scientific rather than practical interest. He produced a small phial which contained the essence or odoriferous principle of honey. It was an extremely delicate scientific product and had been extracted by Monsieur Behal, of the Ecole de Pharmacie, Paris. The scent reminded one of some kinds of honey.

Mr. Pugh moved, and Mr. Willard seconded, a vote of thanks to the chairman, the latter gentleman remarking how extremely fortunate the members were in being able to benefit by the services of a man with Mr. Cowan's wide experience. Wherever bee-keeping was conducted the world over, there Mr. Cowan had been as a student, and was always ready to give others the advantage of his unrivalled knowledge.

The Chairman, in returning thanks, said it was always a pleasure to preside at the meetings of the association and be in the company of bee-keepers.

The proceedings then closed.

The monthly meeting of the Council was held on Thursday, 19th inst., at 105, Jermyn Street, S.W., Colonel Walker being voted to the chair. There were also present Dr. Elliot, Messrs. T. Bevan, W. Broughton Carr, J. B. Lamb, and the Secretary. Letters apologising for inability to attend were received from Mr. T. W. Cowan, Mr. T. I. Weston, Mr. R. T. Andrews, Mr. R. Godson, and Mr. A. G. Pugh.

The minutes of the previous meeting were read and confirmed.

Eight new members were elected, viz.:

Dr. H. Corner, Brook House, Southgate.

Rev. H. R. H. Ellison, Hothfield Rectory, Ashford, Kent.

Mr. B. Harding, 12, Railway Terrace, Westerham, Kent.

Mr. G. S. Kemp, Iceland House, Tresco, Scilly.

Mr. Austin Ledwith, 8, Salop Road, Oswestry.

Mr. G. E. Rogers, Beeholm, Newnham, Cambs.

Mr. E. R. Seadon, 23, Stanley Road, Bromley, Kent.

Mr. L. McNeill Stewart, W.B.C. Apiary, Old Bedford Road, Luton.

The Finance Committee's report, presented by Dr. Elliott, gave particulars of receipts and expenditure to date, and was duly approved.

Arrangements were made for the examination for first-class expert certificates to be held on Thursday, May 17, at 12, Hanover Square, London, W.

The schedule of prizes in the Honey Department at the forthcoming Dairy Show in October was revised for approval by the B.D.F. Association, and nominations of judges made for this show and for the Grocers' and Confectioners' Exhibitions respectively.

It was reported that the Royal Society for the Prevention of Cruelty to Animals had again been good enough to grant facilities for the holding of meetings of the Society at 105, Jermyn Street, S.W., for a further period of one year.

The Council decided that the cottage hives to be presented by the President (the Baroness Burdett-Coutts) be offered for competition at the annual shows of the affiliated county associations, in classes open to bona-fide cottager bee-keepers for the best sample of either comb or extracted honey. The secretary was instructed to ascertain how many of the associations desire to take advantage of the offer.

The next meeting of the Council will be held on Thursday, May 17.

THE "ROYAL" SHOW AT DERBY.

It is to be feared that the present spell of cold weather, following on the warmth experienced in the early part of the month, will have in some degree militated against entries for the important show at Derby on June 27 to 30. The changed outlook is all the more regrettable, because of entries closing on Tuesday next, May 1.

No doubt the Council of the Royal Agricultural Society will be approached by the B.B.K.A. in the interest of the bee department with the view of obtaining an extension of time for closing entries till the final date, viz., May 29. There is still ample time (more than two months) in which to secure surplus before the staging day, and the present strength of the majority of well-kept stocks should

encourage entries, a fact which we trust readers will take advantage of by applying at once to Mr. Young for a copy of schedule.

CUMBERLAND B.K.A.

ANNUAL MEETING.

The annual meeting of the Carlisle district of the Cumberland Bee-Keepers' Association was held at the Northern Temperance Hotel, Carlisle, on April 7. Mr. A. Mitchell-Dawson, of Keswick, presided, and there were also present Messrs. J. Stormonth, H. E. Borthwick, G. W. Avery, T. Aird, Peter Johnston, J. R. Tiffin, J. W. Veitch, A. F. Helps, and Jas. Lunnin, with the hon. secretary and treasurer, Geo. M. Saunders.

The financial position of the Association as regards the deficit of £71 2s. 6d. on an expenditure of £285 12s. 3d., was duly considered. The report of expert's tours showed a total of 3,207 hives examined, against 2,115 in 1904. Of these 11 per cent. were found to be diseased, being a reduction of 1 per cent. Foul brood has decreased ever since the Association started, but the consequent work and expense have been considerable. The membership is now 562, as against 542 in 1904.

Fifteen candidates had attended examinations, held at four centres, for the B.B.K.A. third-class expert's certificates, six of whom were successful. Eight candidates had also been examined for the second-class certificate, six securing a pass.

The balance-sheet showed that the year had been started with a deficit of £42. The County Council had made a grant of £25 towards this deficit and another grant for the current year of £75. The subscriptions amounted to £81 and donations £17. At the end of the year there was an adverse balance due to the bank of £71 2s. 6d., the total expenditure being £285 12s. 3d.

The report and balance sheet were adopted.

On the question of the number of visits to be given by experts, it was decided that two visits should be given if possible.

Lord Muncaster was re-elected president, Canon Rawnsley, chairman, Mr. James Thomson, vice-chairman, and Mr. J. F. Hope, hon. auditor.

Votes of thanks were passed to Mr. George M. Saunders, the hon. secretary and treasurer, and to Mr. Veitch, the local hon. secretary for Carlisle, for their services, and they were re-appointed.

Upon the motion of Mr. Saunders, it was agreed that the minimum price for honey sold wholesale by members of the Association should be 9d. per lb.

A discussion took place on the subject of the Bee Pest Bill. Last year Mr. J. W. Lowther undertook to communicate with the President of the Board of Agriculture on the subject, but a letter was read from him stating that he would not now be able to assist in the promotion of the measure.

The Secretary stated that it was now intended to include Scotland in the Bill, and that the question had also been taken up in Ireland. The matter had also been taken up by various County Councils, and this Association would continue to do all they could to help it forward.—The Chairman inquired if a measure was likely to be brought in this session.—The Secretary said it rested with the Irish. The Irish intended to introduce a Bill, and when Ireland got a measure there was bound to be one for England sooner or later. A vote of thanks was passed to the Irish Bee-keepers' Association for its generous contribution of £5 towards the C.B.K.A.'s expenses in furthering the Bill in Great Britain.

Expressions of thanks were passed to the speaker, Mr. Miles MacInnes, and Mr. C. Courtenay Hodgson for the interest they have shown in the Association.

Other formal business was transacted, and the meeting concluded with a vote of thanks to the chairman.—(Communicated.)

Correspondence.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

**** In order to facilitate reference, Corresponderts, when speaking of any letter or query previously inserted, will oblige by mentioning the number of the letter as well as the page on which it appears.*

NOTES BY THE WAY.

[6281.] I write on the 23rd of the month, and we have so far had no growing "April showers," while the prevailing winds have been cold nor'-easters. The result is that with almost continuous sunshine the fields yield very little forage for the busy bees in purely agricultural districts such as ours. On the other hand, fruit-growing districts are now a mass of blossom, especially where damsons are extensively grown. The trees appear as if laden with snow, and as one passes through these inviting districts it suggests a trek on the part of beemen to such locations with their early stocks in order to secure the first of nature's floral offerings. It seems to me that such

localities as I have named above would be the place where the early breeding races of bees would prove advantageous to their owners.

Importing Foreign Bees.—With regard to the desirability or otherwise of importing foreign bees to this country, the subject was so fully and lucidly dealt with by our esteemed Senior Editor on page 141 of B.B.J. of April 12, that I feel we are all under a great obligation to Mr. Cowan for the good advice therein given, and I trust every bee-keeper will read the page carefully and attentively.

Over-lacing Sections. — The subject of over-lacing sections on the show-bench I notice was also discussed at the same meeting, and coloured labels introduced of suitable width to prevent this. I myself, as an old exhibitor (and one who has been penalised among the "disqualified" ones more than once), should strenuously object to disfigure my exhibits of comb-honey by the use of coloured bands, and I sincerely trust that no rule or regulation will ever be inserted in any schedule of the B.B.K.A. shows to compel bee-keepers to use coloured bands. That point should be left to individual taste, and I feel sure that a very large majority of bee-keepers who exhibit will still use white paper for covering the wood of sections, whether laced or plain. When I first placed lace bands (lace both sides) on the market I had no thought of using them for show purposes. My idea was to have something that would cover up the finger marks and other unsightly stains of propolis, etc., one sees on sections after removal from the hive. The show-bench is, to my mind, a very small part of bee-keeping, and should only be regarded as the initial stage leading to the honey market. The dozen sections staged by an exhibitor should be a fair sample of the whole of the honey crop he has to offer to the wholesale buyer. Every parcel he sends to his customers should be sent off in as good condition and as well glazed (not necessarily so narrow edging, of course, but equal in every other respect) as those he exhibits. In saying this, I do not wish to decry coloured bands for trade purposes. If producers think that either red or blue bands improve the appearance of their sections, by all means let them use them, but if these bands are cut of a regulation width for the show-bench very few of them will be used for trade purposes, because poorly filled sections will seem light in weight compared with those with wider lace-edging.

Queen Wasps.—Yes, the time for queen wasp destruction is with us again, as Mr. Taylor reminds us on page 154. I have already killed a good few among the warm wraps over brood nests. There are no "cones" at air-holes in most of my hive-roofs, so that every season I get a good number of "tramps" in the shape of queen wasps who take lodgings, and they are easily dispatched when found.

Preparing Sections for Use. — Before folding sections, lay them for a time on a damp floor, covering them with a damp cloth; this will make the corners tough and lessen breakages. When cutting foundation in full sheets so that the bulk may be as well filled as wished for, first take a section, fold it square, make all sides equal—i.e., cut off the corners of a four-bee-way (or the sides of a two-bee-way) section—then take a piece of broken section, cut part of the two ends away so that it will just squeeze into the folded section, leaving, say, $\frac{1}{2}$ in. to $\frac{3}{4}$ in. standing out; fix same with small wire nails, or glue it in tight up to the side. This is your gauge for cutting by. This done, take several strips of extra thin "Weed" super $11\frac{3}{4}$ in. or 12 in. long, lay evenly on each other; then place your "gauge" at left-hand top end of the foundation. Now, with an old knife (made hot in the fire), cut the pieces, and it will be found that they will touch both inside walls of section, and when fixed at top will hang within $\frac{1}{4}$ in. to $\frac{3}{8}$ in. of the bottom of section. This will stretch, so that the bees will build to the bottom. If these details are carefuly attended to, the comb in sections will be built to the wood all round, and thus be more marketable in every sense of the word. See that all sections are square as they stand in the rack, and that the hives are placed level before supers are ready to put on. Finally, do not forget to wrap all racks of sections snugly with some soft warm material. If these few hints are carried out carefully, I may venture to say it will be worth more to readers than a year's sub. for the B.B.J. —W. Woodley, Beedon, Newbury.

HOMES OF THE HONEY BEE.

THE APIARIES OF OUR READERS.

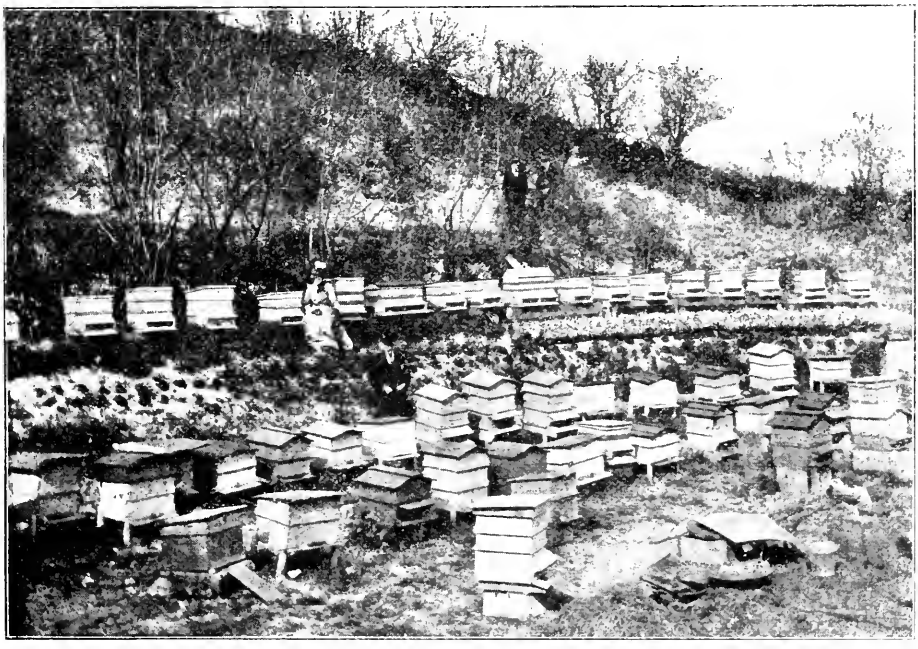
The "Home of the Honey Bee" seen on next page appears under exceptional conditions, the tone block being engraved and waiting its turn for insertion before Mr. Nicholls had decided to give up his bees owing to his health giving way. We are sorry for this, but the following "notes" make it clear that our friend had no option. The notice in our prepaid advertisements gives particulars of sale.

"I herewith send you a few 'notes' regarding my bee-experiences, along with photo of my Dell apiary at High Wycombe. I began bee-keeping in 1886

with a small swarm or cast, which settled in a neighbour's garden and was bought by myself for a shilling. Even with this very modest beginning I soon caught the bee-fever, and as the very old skep in which the bees were showed signs of giving way, I enlisted the help of an old skepist, who undertook to drive the bees from the skep and put them in a new hive for me. Unfortunately, however, he placed the combs of honey cut from skep on the ground outside hive for the bees to carry back the contents into their new hive. The consequence was that on returning home at night I had my first experience of an 'uproar' among the hives, with the result that all my bees were killed, while the honey was carried off by maraunders and lost. This was a bit of a damper on my bee-keeping enthusiasm. But, nothing daunted, the same autumn I purchased six more stocks in skeps, and, as the following summer turned out bad, the honey season was a failure, so I drove the whole of the bees from their skeps, and placed them in four frame-hives made by myself. I then fed them up well for winter.

"In the year 1900 I purchased, from Mr. Frank Benton, a Carniolan queen for 10s. 6d., and introduced her to a black colony. From this stock I had an immense swarm and a cast. Next season my troubles began, for, with several stocks of Carniolans on hand, I had eighteen or nineteen swarms and no honey. At this time I was living over two miles away from my work, and about every three or four days the cry came, 'another swarm out,' so I was very glad to drive the lot and sell them for driven bees. Had I known as much about bees as I do now I should have re-queened with a black queen. No more Carniolans for your humble servant. To return back to my apiary I may say my dell is an ideal place for bees, as the expert that paid me a visit can vouch for.

"In the course of my twenty years' experience I have had to move my bees three times, and I think the place I have them now in is an ideal one for bees, surrounded as it is by a high bank, and no cold winds cutting to blow the bees about on their coming home heavily laden. The lady seen on the bank is my wife, who gives me great assistance in the extracting, having upwards of 500 store combs in shallow frames. I wholesale most of it in 5 or 6 cwt. lots. The photo only shows about fifty hives, but I have seventy stocks in all. Last autumn I re-queened nearly all, as I am compelled, much to my regret, to sell out on account of my health. I therefore close these few notes very regretfully, but my occupation (that of a chairmaker), along with the work of managing a large apiary, is too much for



MR. ARTHUR NICHOLL'S DELL APIARY, HIGH WYCOMBE, BUCKS.

me, and leaves me no option. Wishing to all brother bee-keepers a good season this year, I extend a hearty invitation to anyone who may choose to pay me a visit at the Dell Apiary."

CORRESPONDENCE.

(*Continued from page* 164.)

BEES AND FOUL BROOD.

A USEFUL SUGGESTION TO TOURING EXPERTS.

[6282.] In view of the recent discussion at the B.B.K.A. Conversazione as to the relative disease-resisting powers of British and foreign bees, might I suggest that touring experts would be conferring a benefit on the craft at large by observing and noting carefully the nationality and, as far as possible, the particular strain (*e.g.*, pure imported, first or second cross, etc.), of all stocks affected with "foul brood." Observations might also be extended to other diseases and pests, such as dysentery and wax moth; in fact, there are numerous ways in which experts might add to our common knowledge.

The expert has opportunities which are often inaccessible to the ordinary bee-keeper, and though doubtless he is hampered by want of time, yet, with the aid of a tabulated note book, he might, in a short time, collect facts and figures which would be of considerable value to his less fortunate brethren.—THOS. S. ELLIOT, M.D., London, S.E., April 18.

[The above suggestion is valuable from several standpoints, though we fear it will be somewhat late for general adoption this year, seeing that some experts are already at work, while most of the county associations will have completed their arrangements for the present spring tour. Such experts as are fully interested in their work might, however, easily make up "a tabulated note book" for use—as suggested by Dr. Elliot, and embody therein the facts and figures in the annual report to their respective associations at the close of the year. Should the above proposal be adopted we might ourselves suggest that the "facts and figures" so gathered be made available for the benefit of bee-keepers as a body by experts who have taken the trouble to follow out the plan, sending full details for publication so soon as the present spring tour closes. If this was done, the information so obtained would be in print, and available for inclusion in the expert's annual report to the association by whom he was engaged. We would gladly supply free copies of the "B.B.J." in which such reports appeared to experts requiring them.—EDS.]

SCOTCH HEATHER HONEY

AT LESS THAN 3D. PER LB.

[6283.] In your issue of April 5 (page 137) we stated that Messrs. Ingram Bros. and Co., of 34, Robertson Street, Glasgow, had been offering and invoicing "Pure Scotch Heather Honey" at under 3d. per lb., in London, in 5 cwt. barrels.

In November last, Messrs. Ingram Bros. and Co. invoiced a barrel containing 5½ cwt. of "Pure Scotch Heather Honey" to a firm of wholesale grocers in Eastcheap at 26s. 9d. per cwt., less 2½ per cent. discount, ex wharf, London, which is about 2¾d. per lb. This price included their profit, agents' commission, and freight from Glasgow to London. The Eastcheap firm referred to kindly lent us the above invoice, dated November 9, 1905, and we submitted it to the Editors of the B.B.J. for inspection. We also submitted for inspection the "Clyde Bill of Entry," dated Custom House, Glasgow, 24th ulto., showing imports at Glasgow, and giving name of Messrs. Ingram Bros. and Co. as importers of a large quantity of foreign honey. [This is so.—EDS.]

We are continuing our investigations, and hope to submit further information at a future date.

Scottish bee-keepers state that last season they had no difficulty in obtaining 1s. 4d. and 1s. 6d. per lb. for Scotch heather honey, and 7d. and 8d. per lb. for clover honey, and that it was a poor season, honey scarce.

We ask every bee-keeper in Scotland to follow this matter up, and push it to its logical conclusion, as it affects the very foundation of their industry.—SHAW BROTHERS, 12, Idol Lane, London, E.C., April 23.

A WORD FOR FOREIGN BEES.

[6284.] From the BEE JOURNALS of April 5 and 12 in report of the B.B.K.A. Conversazione, I see you are all down on Italian bees. Well, I must say they are, according to my experience, not very satisfactory as honey gatherers, and when crossed with other varieties my advice to bee-keepers is, "Don't touch that stock," or if you have to close the entrance to their hive do it with a long stick, for if you attempt to go too near them, why they will make a bold attempt to sting you to death, and eat you if they could! Seriously, though, let me say, I am located close to Carinthia, where the Carniolan bee is at home, and have kept bees in this country for the last seventeen years, without ever having seen foul brood, although I have seen a good many apiaries away from my own, and it appears to me that the two BEE JOURNALS I have mentioned are likely to frighten

anyone from purchasing bees from any bee-keeper out here. I am not sending, and never have sent, any bees to England, but if I should I would certainly see that no queen was sent which would carry with it foul brood and thus do a fellow countryman a grievous injury. On the other hand, if a bee-keeper receives a queen bee, say from Italy, it may happen that the stock to which she is introduced may be infected with the disease from a hive near at hand, and thus the purchaser of the Italian queen might readily, but wrongfully, conclude that the foul brood was introduced from Italy. I am a son of Erin, and thus a countryman of your own, but in this case justice impels me to stand up for the foreigner, and to write a few lines in his defence, as we now hear much of the "Entente cordiale" between nations. My only son is also very near you, for he is at Chatham on board H.M.S. Black Prince in the Royal Marine Light Infantry. In conclusion, let me say how much I should like to make the acquaintance of our great bee-man, Mr. Cowan, whom I have not yet seen (though I have had the pleasure of meeting Mr. Carr, our junior editor). I could promise both our editors a warm Irish welcome if ever they come this way. HENRY RATHBORNE, Trieste, Austria, April 16.

P.S.—I have only fifty-six hives in full work this spring, but I hope by July to have seventy or more colonies.

Queries and Replies.

[3265.] *Robbing in Spring.*—I shall be glad if you will inform me, in the columns of the B.J., how I acted wrongly in the following circumstances:—Thursday last being a very warm day, I took the opportunity to transfer two of my stocks to new hives, and on examination found them in good condition, with large patches of brood on each side of three frames in both hives, and abundant stores. Although I thought I was very careful not to expose them, I find that for some reason I have induced robbing in both cases, whether by bees from my other two stocks or strangers I do not know. I tried putting glass in front of entrances to stop it, but finding it still going on, have closed entrances all day to-day with perforated zinc. I therefore ask: 1. Should I have deferred the transfer until evening? 2. On how many successive days should the entrances be closed to stop robbing? 3. Will you kindly give name and address of the secretary of the Kent Bee-keepers' Association? Wishing you and all bee-keepers success, I send name and sign—SEXTUS, Kent, April 16.

REPLY.—1. It would have saved trouble had you deferred transferring till bees had quieted down for the day. The odour of honey from the open hives no doubt attracted flying bees from other hives, and so started the mischief. 2. It is risky to close entrances for more than an hour or two at a time. You had better open them wide enough for two or three bees to pass in, and if there is any recurrence of robbing sprinkle the robber bees about entrance with water to which a few drops of carbolic acid has been added. Let your watering-can have a fine rose, so as not to drench the bees. 3. The Kent B.K.A. is unfortunately in a state of suspended animation for want of a secretary just now, so we cannot help you.

[3266.] *Heating Honey Without Deterioration in Flavour.*—I shall be much obliged if you will kindly answer the following query in your valuable paper: It would be convenient for me to keep my honey in the bottles which I use for sterilising fruit, but to enable me to create the required vacuum to close the bottles it would be necessary to subject them with their contents to a heat of 140 deg. F. for two hours. Will you please inform me whether this would be likely to seriously affect the flavour of the honey? The bottles and sterilising apparatus which I use came from Messrs. Fowler, Lee and Co., of Maidstone, and perhaps you have seen them, or understand the principle on which they are worked. Name sent for reference.—H. M. M., Utrecht, Natal, March 14.

REPLY.—Honey may be heated up to a temperature of 160 deg. without detriment to its flavour, and will even stand 180 deg., but bottling honey on a large scale is generally done at 160 deg. Whether the honey you wish to bottle will stand the temperature you name for two hours without affecting its flavour can only be determined by experiment, but from what we know of the principle we should think that the honey would not be appreciably affected.

[3267.] *Dealing with Vicious Bees.*—I have a particularly strong stock of Hybrid Cyprian bees on my lawn, and owing to their vicious disposition we are deprived of the use of half the lawn. I do not wish to destroy the queen as the bees are excellent workers; at the same time I am anxious to have a stock of quiet bees on the position of this hive, and so ask if I could remove the Cyprians to an adjoining paddock. Then place an empty hive fitted with full sheets of comb

foundation in its place, so that flying bees will return there and enter the hive prepared for them. Then in a few days introduce a new queen of a more gentle strain. I shall feel obliged if you will let me have a reply in next week's "B.B.J." I send name and sign, A. J. R., Middlesex, April 19.

REPLY.—The removal of your vicious stock to an adjoining paddock at this season would cause the loss of more or less bees from the colony so moved. But the bees that returned to the old stand would be of no use in forming a new stock after the manner proposed. If, therefore, the change of position is imperative, the bees should be moved as soon as convenient, and in order to minimise the loss lay a small branch or twig on the flight-board across the hive entrance (so that the bees will need to work their way out) for a day or too after moving. This will cause them to notice the change of location. Later on you might purchase a nucleus colony of Carniolan bees to occupy the stand on lawn. The latter variety are quiet enough, and will give little trouble, so far as regards stinging.

[3268.] *Pollen Carrying and Queenlessness.*—I should be glad if you will answer to this query. One of my stocks has seemed strong, and without doubt has been carrying in pollen. But when I went through them this Easter there was no sign either of queen, brood, or eggs, although there is a fair amount of freshly gathered pollen in the combs. There are also several drones in the hive, and from my limited experience I should judge them to be this year's. I had imagined that the fact of bees carrying pollen was a proof of there being a queen and brood, but in this I am apparently mistaken, as even yesterday I noticed them taking in pollen, although perhaps in small quantities. Perhaps you can explain matters which are beyond me. Name sent for reference.—ENQUIRER, Ash, Surrey, April 18.

REPLY.—The most natural inference to be gathered from the above is that there is a fertile worker in the hive. A week or two will show whether this is so or not, because drone brood will be found in worker cells. On the other hand if the stock is really "strong," as stated, it might be worth re-queening; otherwise the bees can only be utilised by uniting them to another stock. See notices to correspondents (page 170) for reply to other query.

[3269.] *Hunger Swarms.*—I have just had a rather strange experience with one of my hives, and would be much obliged for information regarding it through your queries column. The hive in question was found to be queenless this spring, and I therefore united the bees to a driven lot of bees with queen I got from England in November last. This was done on the 7th inst., and on the 9th a swarm came from a neighbour's apiary and straightway entered the hive containing the bees I had united. The result is that there is much fighting going on. I therefore ask: 1. What will be the probable result, or which of the queens is likely to be killed, the one belonging to the hive or the one that came with the swarm? 2. Is it not rather early in the season for a swarm to come off in our part of the North? Thanking you for past help through the columns of "B.B.J.," I send name and sign NOVICE, Alyth, Perthshire.

REPLY.—1. The strange queen would probably be killed along with many of the bees accompanying her. 2. The intruders which entered the hive no doubt left your neighbour's apiary through being short of stores, and would be tempted towards the hive containing the united stocks owing to the commotion caused by joining up the two colonies. Such hive desertions are known as hunger swarms.

[3270.] *Artificial Swarming for Increase.*—Would you please answer these few questions, as I am only a bee-keeper of eighteen months, and am rather in a fog with regard to what to do for the best in increasing stocks. I made my W.B.C. hive from the directions in "Note Book." I also take your valuable "B.B.J." and "Record," and have found the "Guide Book" most useful. In fact, all I know has been learned from your publications. I built up my only stock from 4lb. of driven bees in September, 1904, according to instructions in "Guide Book," and last season I had seventy 1lb. sections from it. My hive is now crowded with bees on ten frames, and I would be glad of replies to the following questions:—1. On looking through the frames last week I came across two old queen cells, and would like to know if the bees have re-queened themselves last year. 2. When could I make an artificial swarm, seeing that there are a lot of drone cells sealed over in centre comb of brood chamber? Could I make it at once, and follow Mr. Alexander's plan as given in the "B.B.J."? I will be very pleased to have an early reply. I send name, and sign myself A BEGINNER, Ilfracombe, April 17.

REPLY.—1. The appearances noted point to the probability of the bees having raised a new queen last year. 2 If you decide on following Mr. Alexander's plan of increasing stocks as described in our issue of May 25 last year in preference

to the methods of making artificial swarms given in the "Guide Book," you must adhere closely to the first-named plan and judge it by results. We have not tried Mr. Alexander's plan ourselves, so cannot speak authoritatively with regard to it.

[3271.] *Specks on Super Foundation.*—The enclosed is piece of section foundation, part of some which I purchased this week. It is, as you will see, all more or less covered with small white specks like the enclosed sample. Will you please say in "B.B.J." what it is? I don't care to use it until I know it is all right.—R. DUTTON, Hightown.

REPLY.—There is nothing really wrong with the sample sent, which is of very good quality. The white specks are merely minute particles of wax, and will disappear if foundation is very slightly warmed by holding in front of fire.

Echoes from the Hives.

Maldon, Essex, April 12.—I send a couple of queen wasps, and am wondering if they are the first you have seen this season. [Yes.—EDS.] I caught them in my garden drinking along with the bees at a small fountain. Glad to say my bees have come through the winter well and strong. They are working for all they are worth this fine weather. It looks as if this year will be a good one for all bee-keepers. —A. C. TEW, Expert.

Easton, Bristol, April 20.—On examining my hives yesterday I found all in good order and was surprised to see quite a lot of thin new honey stored in the combs. In one hive I saw a queen wasp, or as it was very large she may have been a hornet. The bees seemed to take no notice, though it was among the cluster. I tried to catch the intruder, but failed.—J. SKINNER.

[See page 170 for notice regarding feeder.—EDS.]

Notices to Correspondents & Inquirers.

Letters or queries asking for addresses of manufacturers or correspondents, or where appliances can be purchased, or replies giving such information, can only be inserted as advertisements. The space devoted to letters, queries, and replies is meant for the general good of bee-keepers, and not for advertisements. We wish our correspondents to bear in mind that, as it is necessary for us to go to press in advance of the date of issue, queries cannot always be replied to in the issue immediately following the receipt of their communications.

*** Seedlings of Chapman Honey Plant.—We are much obliged to several correspondents who have kindly replied to our request on page 159 last week.

POTSY (Weymouth). — Comb-Building in Candy-Boxes.—1. It is quite common to hear of bees building a little comb in boxes after they have consumed the food given in such receptacles. Nor does this do more than prove that food in plenty along with warmth arouses the comb-building impulse in bees just as it does when there is natural warmth outside and honey to be had in the fields. 2. Floor-boards not cleaned already should be attended to on the earliest suitable day. 3. The same remark applies to examining frames. 4. We can add nothing to the directions for prevention of swarming given in Chapter VI. of "Guide Book," pages 20 and 21. The rest depends on the bee-keeper himself.

HARTWOOD (Tipperary).—Bees and Laurel Honey.—Bees will not gather honey from any natural source that will cause death to themselves through poisoning. You may, therefore, be quite sure that their "tumbling out of the hive" is not from the cause mentioned. The trouble may be from the disease known as bee paralysis.

ENQUIRER (Ash, Surrey).—Bees Deserting Hive.—The few details given are too meagre for us to form any reliable opinion with regard to the hive being deserted.

J. WILLIAMS (Devon).—American-made "Bingham" Smokers.—The only firm we can find in all catalogues on our file who specially list the genuine American-made smoker named above is Messrs. Burgess and Son, Guinea Street, Exeter.

N. E. B. (Kettering).—Weak Stocks Robbed Out by Strong Ones.—It is not uncommon to find weak stocks, when once overpowered and robbed by strong ones as in your case, allowing their more powerful neighbours to carry off food as fast as given without offering any resistance to the marauders. You had better keep on feeding the weak lot, and if the robbers got an occasional sprinkling with carbolised water from a watering can it would reduce the trouble, and probably end it when honey is to be had outside.

BEGINNER (Chingford).—Giving Sections in April.—If the bees are sufficiently strong to fill the body-boxes of your two hives you may give a rack of sections to each, so soon as weather turns warm, and the present cold wind veers southward.

W. PATERSON (Maybole, N.B., and Tyke, Milford, Yorks).—Particulars regarding membership and exams. for experts' certificates of the B.B.K.A. may be had on application to the secretary, Mr. Edwin H. Young, 12, Hanover Square, London.

J. SKINNER (Bristol).—A New Rapid Feeder.—We should like to see the feeder described. If it has all the good points claimed in description you should give it a chance on the show bench.

A. HARRIS (Wavendon).—Bee Feeders.—Your feeder is good, and will no doubt do its work well; but in principle it is not new. We have seen more than one feeder in past years which embodied the same idea as in the one sent. This only proves how experienced bee-keepers often instinctively work out similar ideas to attain the same end.

H. O. B. (Reading).—Model Feeder to Work From.—The particulars desired appear in our "prepaid advts." cols. on April 12 (refer to o 44, page 150).

Suspected Combs.

L. B. W. (Essex.—Your sample contains foul brood of very pronounced type.

A. D. L. (Lichfield).—Comb sent is affected with foul brood of very old standing.

T. H. (Uttoxeter).—There is no disease in sample of comb sent.

******* *Some Letters, Queries and Replies, &c., are unavoidably held over till next week*

Special Prepaid Advertisements.

Twelve words and under Sixpence: for every additional Three words or under, One Penny.

Advertisements for current issue must be received by first post on Tuesday.

A PRONOUNCED SUCCESS.—The BURKITT BEE-GLOVE. With sleeves, 3s. 6d. per pair, post free. Without sleeves, 2s 6d. per pair, post free. The best, cheapest, and most satisfactory glove for bee-keepers.—EDWARD REYNOLDS, Glove Maker, Andover, Hampshire. Wholesale prices to the trade.

BLACK MINORCAS, five laying hens, one cockerel (Webster's strain), sacrifice 18s. the lot. Several cross-bred hens, laying, at 2s. each.—BAKER, Kingsbridge, Devon. o 83

CALCEOLARIAS, strong rooted cuttings, well hardened off, 9d. dozen. CHRYSANTHEMUMS, strong hardy plants, outdoor, 12 finest named varieties, 2s., post free. — HETHERINGTON, 88, Main Street, Brampton, Cumberland. o 79

CHAMPION "NEVER SWARM HIVES," with natural ventilated detention chamber, without extra cost, brood box, 12 Standard Frames, super (room for three), 24s. 6d. "Never Swarm System," 11 years' absolute success, 3½d., free.—HARRIS, Wavendon, Bletchley, Bucks. o 76

DON'T BUY BEE-FEEDING FOUNTAINS when you can make the best yourself. Model will be despatched on receipt of 9d., and your golden syrup tin lid.—H. HAWKINS, Burgh Heath, Epsom. o 87

ENGLISH and ITALIAN BEES FOR SALE, Standard Hives.—THOS. HILL, Scotlands, Cannock Road, near Wolverhampton. o 77

EXCHANGE VIOLIN, bow, and case, valued 12s. 6d., for BEES, on Standard Frames.—MARSHALL, 49, Toll Gavel, Beverley. o 80

FOR SALE, 20 STRONG STOCKS of BEES, in stout Bar Frame Hives, £1 5s. each. Inspection invited.—ERNEST DAVIS, Great Bookham, Surrey. o 84

FOR SALE (a bargain), WAX EXTRACTOR.—Boiler, 17½ x 13 x 12½; perforated zinc cage, 17 x 11 x 9; in thorough good condition. Price 7s. 6d.—F. R. COURT, Green Street, Sittingbourne. o 74

FOR SALE, APIARY of about 70 stocks of healthy Bees, in Bar Frame Hives, together with all appliances. What offers for the lot? Inspection invited, or particulars sent.—A. NICHOLLS, 38, Oxford Road, High Wycombe. o 72

FOR SALE, half a dozen SWARM CATCHERS, 2s. each, or 9s. the half dozen. Also quantity of Super Clearers, 1s. 6d. each; three for 4s.—F. R. COURT, Green Street, Sittingbourne. o 75

FOR SALE, guaranteed healthy STOCKS of BEES, on Standard Frames. 1905 Queens, £1 each; box 1s. extra, returnable. Inspection invited.—ROWLAND, Cliff, Holbrook, Derby, Expert to the Derbyshire B.K.A. o 45

GEM AIR-GUN, worth 21s.; exchange for Bees, in skeps or frames. What offers? SIX FRAMES BEES WANTED, early in May. Cash.—WARD, 190, Slade Road, Erdington. o 78

GIVING UP BEES.—Complete Stock for Sale, cheap. —FRASER, Cherry Willingham, Lincoln. o 85

GOODS YET REMAINING TO BE SOLD, and owner going abroad.—70 Shallow Combs, perfect condition, 6d. each; 28 ditto, brood size, 6d. each; 6 Queen Excluders, 6d. each; 9 Standard Dummies, 4d. each; 3 Outer Lifts, 1s. 6d. each; 18 Quilts, American cloth, 3d. each; 1 "W.B.C." size Super Clearer, 1 Well's ditto, 1s. 6d. each; Observatory Hive, 10s.; Cheshire's Wax Extractor, new, 11s.; Microscope, new, £3.—ALFRED HALL, Many Pitts, Marton, Blackpool. o 86

ITALIANS, first cross, best honey gatherers, good-tempered. Strong ten frame stocks, with last season's queens; guaranteed healthy for this season's work; package free, 25s. each.—O. KNIGHT, Epney, Stonehouse, Glos. o 58

LIGHT HONEY, in screw-cap jars, 8s. dozen; Bulk, 53s.; tins free; carriage paid. Sample 2d.—CHARTER, Tatlingstone, Ipswich. N 78

NOVELTY.—Picture Postcards of the Beautiful colour-photo engraving of Sladen's "Golden Prolific" and "Extra Golden" Bees. Three for 2½d., 8d. per dozen, post free. Every Beekeeper's Postcard Album should contain one of these.—SLADEN, Ripple Court Apiary, Dover. o 56

OVAL WIRE NAILS.—1in., 4d.; 1¼in. 3½d.; 2½in. 3d.; Panel Pins, best, ¾in., 6d.; seconds, 4d. per pound; 5 lbs., one of each sort. 1s. 6d.; post free, 2s. 2d. Samples two stamps.—S. WRIGHT, Southgate Stores, Bury St. Edmunds. o 19

QUEENS BY RETURN OF POST, reared 1905, healthy, 5s. each.—O. KNIGHT, Epney, Stonehouse, Glos. o 49

SECTION HONEY WANTED, pale colour, free from granulation.—T. SMITH AND CO., 17, Cambridge Street, Hyde Park. o 88

SHALLOW COMBS, clean, healthy, 6s. dozen. Also two stocks blacks, in well-made hives, two supers, £2 2s. each.—WALKER, Confectioner, Patricroft. o 81

STRONG STOCKS, on Standard Frames, 1905 Queens. Guaranteed healthy.—W. WOODS, Normandy, Guildford. o 89

PRIME, HEALTHY, EARLY SWARMS, from Bar Frame Hives. — ALBERT SANDYS, Drayton, Berks. o 21

PRIME NATURAL SWARMS, May and June, 12s. 6d. each. Boxes, 1s. Cash with order, or deposit.—G. JORDAN, Steeple Aston, Oxford. o 91

PROTECT YOUR FRUIT.—Tanned Garden Netting, only best quality supplied. Order promptly, as nets are scarce and must be dearer. 25 x 8 yds., 50 x 4, and 100 x 2 yds., 9s. each. Add ten per cent. for other sizes.—L. WREN AND SON, 139, High Street, Lowestoft. o 92

Editorial, Notices, &c.

SCOTCH HEATHER HONEY

AT LESS THAN 3D. PER LB.

While preparing for press, the following communication was received, with a request for its insertion in our next issue. We have no hesitation in complying with the request made; but we may — in the general interest of the industry it is our privilege to represent—have a few words to say on the subject next week.

Editors,

BRITISH BEE JOURNAL.

SIRS,—My attention has been drawn by my clients, Messrs. Ingram Brothers and Co., 34, Robertson Street, Glasgow, to an article which appeared in your issue of 26th inst., page 166.

Messrs. Shaw Brothers, 12, Idol Lane, acted as London agents for Messrs. Ingram Brothers and Co., for some time, but their services were recently dispensed with. Messrs. Shaw Brothers have made other statements about my clients which they had to withdraw and apologise for.

The honey in question is absolutely pure, but was faulty, and my clients succeeded in putting it right. It was sold on a sample six months ago, and up till now no complaint has been received from buyers. My clients are dealers in various grades of honey, and they demur to a comparison between a retail price in glass packages and honey sold in bulk in barrels, as Messrs. Shaw Brothers have done in the article referred to. The question, if any, is one entirely between buyers and sellers, and I have accordingly advised my clients not to indulge in correspondence through the Press.

If Messrs. Shaw Brothers consider they have a case against my clients I am prepared to accept service of same.—I am, Sirs, yours faithfully.—ARCHIBALD ROSS, Solicitor, 102, Bath Street, Glasgow, April 30, 1906.

EDUCATIONAL POSTCARDS.

Nature Study—Leaves of Trees.—We recently noticed the facsimile representations on seven postcards of all the species of British ferns, published by the County Press, 19, Ball Street, Kensington, W. The interest aroused—indicating the great importance now attached by Educationists to Nature-study subjects—has induced the same publishers to issue twelve postcards for one shilling, including facsimile prints, popularly and scientifically named, of the leaves of the principal British trees and shrubs. These prints show in their design, by a well-known writer on sylvan subjects, Mr. Francis George Heath, what had never before been attempted; the exact venation —or system of veins—in the cellular tissue of each leaf, giving to each figure represented a very marked and interesting individuality.

REVIEWS OF FOREIGN BEE-JOURNALS.

BY "NEMO."

A Year's Work in Switzerland.—No. 3 of the *Schwistzerische Bienenzeitung* contains a report of one year's work at the various experimental stations in the German Cantons of Switzerland. The report, which occupies fifty pages, has been prepared by M. Kramer, the president of the Swiss Bee-keepers' Society, and shows an enormous amount of work. On the first page we have a map showing the distribution of the experimental stations, of which there are thirty-two, and the altitude of each, together with a list of the bee-keepers in charge of each station. The report is divided into six sections, each of these being subdivided into sub-sections. For instance, under "1. Winter," we find the weather, the condition of the bees during winter, period of inactivity, dysentery, first flight, stores consumed, etc. There are several diagrams showing maximum and minimum temperatures, and a large folding sheet showing in red the increase in weight of hives, and in black the decrease, during the gathering season. In addition to the maps and tables, the report is profusely illustrated with half-tone blocks of various flowers coming into bloom at the different seasons. Not only does the report itself show an immense amount of work, but it also shows the enthusiasm of those who assist in furnishing data for such a report. Herr Reber, of St. Gullen, has been keeping these records for twenty-one years, and there are others who have been doing so for twenty years, namely, Herr Göldi, Herr Rohner, and Herr Branchli. There are now thirty-five devoted bee-keepers who assist in this work. How many, we wonder, are there in this country, who take this trouble for the benefit of the pursuit?

Cure of Ophthalmia.—Dr. Tarnawski mentions in *l'Abeille Bourguignonne*, a curious case of a person suffering from

ophthalmia, which had resisted every treatment. The individual was one day stung by a bee on the left eye-lid, and on rising the next morning, was astonished to find that the light did not hurt him at all, and also that the purulent secretion beneath the eyelid had disappeared. His astonishment induced him to try the experiment of getting stung on the right eye, which he succeeded in doing, with the result that the cure was as complete as it had been with the left eye.

The Honey Harvest in Tunis.—M. Bourgeois writes in *l'Apiculteur*, that the honey harvest is very variable in Tunis, and is entirely dependent on the rains, whether they are early and abundant. There is then a flow of nectar in the autumn, and bees swarming on the carob, heather and rosemary. In the spring there are the fruit trees and pasture flowers. In June and July there is nectar from eucalyptus and thyme. This last is eagerly sought after by the natives on account of its fine aroma.

Instruction in Bee-Keeping in Hungary.—According to the *Leipziger Bienenzeitung*, we learn that the Minister of Agriculture in this country appointed three lecturers in 1881 for the purpose of encouraging bee-keeping and the spread of information as to the best methods of managing an apiary; but four years later it was found that these three instructors were insufficient for the purpose, and three others were added, with the addition of an inspector to superintend the whole of the work. This inspector resides in Buda Pest, whereas the peripatetic instructors live in the centres from which they can easily reach the various parts of their districts. The inspector has a salary of 2,000 krs. (£83 10s.), with an allowance of 1,200 krs. (£50 2s.), for travelling expenses, and 700 krs. (£29 5s. 6d.), additional for attending lectures. The instructors receive a fixed salary of 1,600 krs. (£66 15s. 6d.), and 1,600 krs. for lecturing, also from 350 to 490 krs. (£14 12s. to £20 9s.), for travelling expenses in their districts. The total cost for this branch of education amounts to about 30,250 krs. (£1,256 9s. 6d.), a year. In addition to this, there is expended every year a sum of 28,200 krs. (£1,170 19s. 6d.), for the purchase of appliances such as extractors, hives, and small items such as bee veils, etc., honey knives, etc., which are distributed gratuitously to pastors, schoolmasters, agriculturists, and foresters who have taken up bee-keeping. A portion of the above amount is also given in prizes for meritorious work done. The Government has an experimental station at Gödölls, where from 200 to 600 hives are kept.

Seminal Vesicle Duct of Queen Bee.—As stated in the *Journal of the Royal Microscopical Society*, E. Bresslaw finds that the so-called "circular muscle," or sphincter, of the seminal vesicle duct does not exist. What is actually present is a complicated pump-like apparatus, whose main parts consist of a parallel pair of longitudinal muscles and a dorsally-placed semi-circular, more weakly developed muscular band.

Bees and Flowers.—In the same journal we read that J. Wery has made experiments with flowers from which the corolla was removed, and some others left uninjured. The position of the flowers was changed from time to time, the respective visits of bees and other insects being counted. In June the uninjured flowers were visited by 107 insects, of which 72 were bees. The flowers without corollas, but still conspicuous, received the attentions of 79 insects, among them being 28 bees. Similar experiments had similar results, and the author states that a glass vessel, containing honey, was left quite unnoticed, while artificial flowers proved as attractive as real ones. He therefore concludes that the form and colour of the flowers are more potent in attracting bees than pollen, nectar, or fragrance. We are, however, unable to agree with this gentleman, being quite certain that bees will visit inconspicuous flowers where there are plenty of showy ones within sight, and every bee-keeper knows the danger of exposing honey—in spring and autumn.

DEATH OF Mrs. CHAS. NASH ABBOTT.

The older generation of B.B.J. readers will share the deep regret with which we learn that Mrs. Abbott, widow of the founder and first editor of the B.B.J., passed peacefully away, surrounded by her family, after a short illness, at her residence, Bedfont House, Southall, on the 25th ult., aged 76. The interment took place on April 28 (the 51st anniversary of her wedding day) at the Westminster Cemetery, Hanwell. The deceased lady was personally known to, and highly esteemed by prominent bee-keepers during her late husband's active career in connection with the bee-industry, most of them having, at one time or another, been hospitably entertained at Hanwell or Southall. When, in 1883, a testimonial was presented to Mr. C. N. Abbott, in recognition of his services to the craft, it was accompanied by a handsome handbag for Mrs. Abbott, in which was a Russian leather purse (containing the balance of contributions, after defraying the cost of dining-room clock, address, etc.). All of these are still in perfect condition and greatly prized by the family, to whom we offer the sincere sympathy of readers, along with our own, in their irreparable loss.

Correspondence.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

**** In order to facilitate reference, Correspondents, when speaking of any letter or query previously inserted, will oblige by mentioning the number of the letter as well as the page on which it appears.*

AMONG THE BEES.

SOME HONEY CURES AND RECIPES.

[6285.] Many bee-books give a few recipes for using honey as an ingredient of food, etc., and a very few mention it as a means of curing some of the many ills that human flesh is heir to. I have purposely abstained from digging into these books, but have picked up a few items at odd times, which I have grouped together without method and now submit to JOURNAL readers. I think this feature of honey production should be much more extensively dealt with than it is. In fact, I fear it is being gradually neglected. Here about it is believed to cure sore throat, chilblains, chapped lips, bad sores or ulcers, burns, scalds, rough cracked hands, and many other minor ills; while as an ingredient in the preparation of cakes, drinks, etc., its use is extensively believed in and advocated.

Honey Shoe Blacking.—Add lamp black to inferior honey to such an extent as will allow the mass to be well stirred. Warm until softened and put in boxes. This preserves its gloss for a long time, prevents cracking, and preserves and softens the shoe leather.

Honey in Infant's Food.—At first the child had half milk and half honey, liquified with water. Then four parts milk, one part honey, with a little water. The child grew strong and plump, and never had a single pain, while it slept soundly the whole night long.

Preserves. — Use two parts gooseberry jelly to one of cheap honey. Boil on slow fire for half an hour. Skim off any froth. If carefully put up the jelly will keep fresh for a very long time.

Honey for Brain Work.—A well-known author acting on the advice of his doctor uses honey largely, and has amply proved by experience that in doing heavy brain work there is nothing better for the system than honey.

Honey Drops.—Mix one-third cupful of extracted honey, teaspoonful butter, an egg well beaten, small cup flour, add some baking powder and a pinch of salt. Drop from a spoon on a tin and bake in an oven.

Insomnia. — When troubled with sleeplessness, rise and take a spoonful or two of honey, and sleep soon comes. For one troubled with this trying affliction, a light supper of bread, honey, and milk will be found soothing.

Honey Tea-cake.—Use one teacupful extracted honey, half cupful of thick, sour cream, two eggs, half teacupful of butter, two cups of flour, small half teaspoonful of soda, one cream of tartar. Bake in oven until ready, and serve, if possible, while still warm.

Summer Drink. — Take six gallons of water, 10lb. of honey, and the white of three eggs. Boil one hour, and then add some cinnamon and ginger. When cold, add a spoonful of yeast. Stir the compound well and lay past for a day when it will be ready for use.

Honey Lemonade.— Proceed as in making ordinary lemonade, but use honey instead of sugar. The flavour will be found much improved, and the effect very refreshing.

Honey for Dyspepsia.—Take a glass of boiling water and stir in it four tablespoonfuls of honey. Drink while hot, just before retiring to bed. It will promote sound sleep, good digestion, free action of the liver and kidneys, and cure nervousness.

Honey Salve.—As a cure for boils and carbuncles, mix together pure honey and flour, making it into a stiff paste; spread on a cloth and lay on the sore, renewing every twelve hours.

A Good Freckle Cure is the following:—Eight ounces of extracted honey, two ounces of glycerine two ounces of alcohol, six drachms of citric acid, and fifteen drops of the essence of ambergris.

A Cure for Asthma.—In a medical work I find it recorded that a doctor ate some ounces of honey every day for two years, and got entirely free of his asthma. Before this he had tried every known cure without securing any relief.

Honey Massage.—Take the yolk of two eggs, two ounces of ground bitter almonds, two ounces of almond oil, add four ounces of extracted honey, and make a paste, which rub on hands, arms, or face.

Propolis Corn Plaster. — Make small plasters of propolis slightly warmed, and apply to corns, and you will feel relieved from the pain of this worrying trouble.

Honey Soap.—Take one pound common soap and add rain water. Place the mixture in a pan and boil till soap is dissolved. Then add an ounce or two of honey, and continue stirring until the water is evaporated. Such a soap is excellent for the complexion.

Influenza Cures.—1. A stiff glass of hot whisky, into which stir two tablespoonfuls of granulated honey. Take on retiring to rest, and repeat if required. 2. For teetotallers, or those who might think the hot ingredient was the principal curer, the fol-

lowing might be used:—In one teacupful of *hot* honey put the juice of one lemon, and take as a dose two teaspoonfuls occasionally, or as often as seems necessary, and as hot as can be endured comfortably.

Instead of Sugar.—Being prohibited the use of sugar by the doctor, I have brought honey into requisition, and used it for sweetening milk-porridge, tea, coffee, etc., and find it most agreeable, and it leaves no ill effect.

Mead.—Put two pounds of honey to a gallon of water, boil it for half an hour, add the peels of two lemons; work this with yeast. Let it stand in a vessel for six months and then bottle.

Honey Vinegar.—Take one part of honey to four parts of water. Expose to heat by sun in open vessel, protected from insects, for about six weeks. The product will be of great strength and of a particularly fine flavour.

Honey as a Food.—Prof. Cook says:—"I believe that no parent can do a wiser thing than to furnish his young children with all the honey they desire to eat, giving freely each meal, but only at meal time. Honey is a much safer food than sugar, and this is specially true for children."

Two Remarkable Honey Cures.—"Nemo," page 52, quotes from a foreign bee-paper a case where honey saved the life of an anæmic patient. The doctor gave her up, but recommended her to try honey and milk, with the result that she became "perfectly well and strong." Quite recently it was recorded in the *Journal* that a lady in the Midlands unable to take any food, as a last resort to preserve life was advised to try honey. This acted like a charm and the lady recovered. I think these two remarkable cures should convince us that there is a virtue in honey.—D. M. M., Banff.

FURTHER SPRING NOTES.

[6286.] *The Weather.* — Opening under ideal conditions, April has, after all, relapsed into a continuance of the wintry weather experienced during the preceding months. With the exception of an occasional—very occasional—semi-mild day, we have had, and are still having, nights of keen frost and days devoted to snow or a disagreeable blend of sleet and rain. Time was when such would have caused anxiety as to the welfare of the inmates of the hive, but experience shows that well-stored stocks left alone are proof against the worst of weather. Conditions are quite different, however, in the case of those wintered on scanty stores and bottle-fed since early spring.

Unsafe Wintering.—We all know the individual who merely removes supers at end of season, and never thinks of making sure that the bees have enough stores for their own use. The acme of carelessness, however, is attained by those who leave racks of sections on all the year round.

If found to contain honey, they are removed, otherwise—well, there is another season coming. Most of us find it necessary to use something in the way of a heat-retainer above brood-nests, and naturally would be inclined to look askance at such an effective heat dissipator as a rack of empty sections between seasons.

A certain bee-keeper here kept on a rack of sections for two successive years without securing anything further than the decease of the unfortunate stock previous to the opening of the third season. Nothing daunted, our hero promptly re-stocked the hive with a prime swarm.

The other day I heard that the fatal disease — famine — had removed the majority of his stocks to the better land. I had a look round, being curious to know whether the above stock was figuring on the casualty list. It was, and, sure enough, the usual rack of combless sections, surmounted by a single strip of carpet, formed the sole winter packing.—J. M. Ellis, Ussie Valley, April 28.

("*Correspondence*" *continued on page* 176.)

HOMES OF THE HONEY-BEE.

THE APIARIES OF OUR READERS.

As a rule, anything in the form of advertisement, appearing in the photographs of bee-gardens kindly sent by our readers for "Homes of the Honey Bee," is, for obvious reasons, carefully painted out just as is done when too many members of the bee-keeper's friends are shown. Nor has this exercise of editorial discretion been objected to by anyone so far. Mr. Simmons' case, however, we have willingly made the exception which proves the rule; and are glad to know that the little labourers inside the hives are busily working in so good a cause, as is mentioned in the following notes:—

"As one of the two persons seen in photo, I have pleasure in complying with the request of my friend, Mr. J. Simmons, to send a few lines to go along with the view of his apiary in 'Homes of the Honey Bee':

"It is now little more than two years since Mr. Simmons began bee-keeping—barely time, so the average amateur might think, in which to record much in the way of success. Mr. Simmons' efforts have, however, met with results so gratifying as to excite at once the admiration of less fortunate 'hobbyists.'

"But yours is a practical journal, and

the 'Notes' must, I presume, also be practical, and with my friend's assistance I am enabled to give a few facts and figures, which it is hoped may prove interesting and helpful to some of your readers.

To begin then:—Early in April, 1904, Mr. Simmons made two frame-hives, and in the same month purchased his first stock of bees, from which he got a swarm, weighing 6¾lb., in May. Both hives were, therefore, now occupied, and before the season ended 109 1-lb. sections were taken from them. This will, I think, not be accounted as a bad beginning.

"In the fall of the same year, Mr. Simmons had the bees of three straw skeps given to him for the trouble of driving, which was successfully done; the three lots of bees being properly united in one new frame-hive and fed up for the winter.

"Thus the season of 1905 was started with three good stocks, which produced three swarms in May, all of which were duly housed in new hives. About the same time a friend presented another swarm, which increased the total to seven frame-hives, all taking the standard frame. Thus seven stocks were in use last summer, and from them 281 sections, and 36lb. of extracted honey was taken before the season of 1905 closed.

"Now, with regard to the pecuniary side of the question. Mr. Simmons states that his total outlay during the two years under review amounted to £9 6s. This includes cost of bees, new hives and appliances, foundation, etc., together with fourteen new section racks. The honey sold realised £11 2s. Provided the coming bee-season proves at all favourable, these Coggeshall hives may be reasonably expected to yield excellent financial results in the course of the present year. But should there be any failure with regard to the results, it will certainly not be due to lack of careful attention on the part of their owner.

"The photo shows four of the seven hives, all of which face the afternoon sun; and it may not be out of place here to explain why these bear such unusual names as appears on the front of each.

"Absorbed as Mr. Simmons is in his two-year-old hobby, he has been for many years, and still is, more keenly interested in various societies powerful for good at home and abroad. Already the institutions represented in the photograph are indebted to Mr. Simmons' bees for contributions amounting to some four or five guineas.

"This gentleman invariably sees to it that his own pleasures make for the welfare and happiness of others. His bees, like his chrysanthemums, have to render aid in his philanthropic work, otherwise they would all get the 'sack' to-morrow, and the writer of these lines would then miss the always pleasant task of assisting—or, shall I say, looking on—in which he is engaged while Mr. Simmons administers food to the 'band of hope' bees with a jug and funnel.

MR. JAS. SIMMONS' APIARY, COGGLESHALL, ESSEX.

CORRESPONDENCE.

(*Continued from page* 174.)

USEFUL NOTES ON BEES.

[6287.] I send you a few notes about my bees for the B.B.J. The time is now come when we may look over our stocks in order to see how they are going on, take notes of their condition, and then prepare accordingly, so as to be ready for whatever of good the season brings. This is, to my understanding, half the battle. Now is the time, too, to give bees a clean hive, as I am doing with my own. I generally keep a spare hive or two on hand, and these I scrub well with boiling water, to which some carbolic has been added, then dry, and give two good, but thin, coats of best paint. I putty up all cracks outside, and fix everything right inside. Then on a fine warm morning I transfer bees and frames to clean hive, not forgetting to sprinkle a little salt on floor-boards, and put on each pieces of naphthaline as well. The bees seem to appreciate their new home, as they go ahead with their work better afterwards. I believe in everything about the bees being as clean and wholesome as possible, and the adoption of this method certainly helps to keep down the ravages of foul brood.

Wintering Bees.—Some twelve months ago one of your correspondents, in writing about his bees, said that he had wintered one or two stocks with a rack of shallow-frames above them instead of packing down closely with quilts over body-boxes. This struck me as a good plan, and I determined to try it. So, after extracting the season's honey, I put back the ten shallow-frames, on a fairly strong stock, last September, for the bees to clear up, in order to see how the method worked with me. Well, sirs, this is, to-day, the strongest and best stock I have. The bees are full up in the hive below, and are well at work in the super already. This speaks well for this method, and I shall certainly try it again, and only hope others of your readers will do the same.

Feeding Bees.—Here is a good plan of working:—Sometimes bees will not enter the feeders; I had a stock that refused, so I took a drawn-out section and laid it flat over the feed-hole in quilt. I then filled the cells with syrup, and now the bees will clear it out almost as fast as I put it there. I hope this may be of some use to others, as it has been to me. Thanking you for such a good pennyworth every week. I send name and sign—R. L.

P.S.—I will send photo of my bee-garden shortly, and hope it will be suitable for "Homes of the Honey Bee."

[We will be very pleased to receive photo.—EDS.]

A PLEA FOR THE ITALIAN BEE.

[6288.] Having seen so much abuse of the Italian bee in your pages, may I be allowed to say a word in its favour? I, for one, have had much experience of them and find they are very easy and pleasant to handle, while extremely pretty to look upon, but as honey-gatherers I find our so-called natives yield much more surplus. But I would ask:—Where can our pure natives be found now, seeing the enormous quantity of foreign queens that are annually distributed all over our island, whose blood spreads from apiary to apiary like wildfire, till there is scarcely a place in the kingdom where foreign blood cannot be traced, more or less? The question then arises—Have not our natives been improved by the introduction of foreign blood? I say, yes, and that, and very considerably. It is the same with any farming stock. We can carry out in-breeding till in the end cattle are almost good for nothing. Is it not then reasonable to say that it will be the same with bees? The intermingling of different races will bring increased vigour to all animal life, and with increase of vigour we get less disease. My experience with our native bees is they are more subject to foul brood than Italians — not that the latter are proof against it, by any means. Italians are more subject to paralysis than natives, but this complaint is nothing compared to foul brood. I have nothing to say in favour of any pure race as honey-gatherers, but I do assert that a great deal of good has been done by the introduction of foreign bees, and, after trying different races and crosses, my best honey-gatherers are a cross between Italians and natives. —O. K., Stonehouse, Glos., April 30.

EXPERTS AND FOUL BROOD.

DR. ELLIOT'S SUGGESTIONS.

[6289.] I was much interested in Dr. Elliot's remarks in your issue of last week (6282, page 166). I have examined 100 apiaries, in which the bees were practically all the black or native variety, except two stocks, and of the whole only sixteen stocks were found to be affected with foul brood. I intend to carry out the suggestion made by Dr. Elliot, and will report further in due course.

In handling the various races of bees I find no difference in either Italian, Carniolan, and English bees, so far as regards resisting the disease. Syrian bees I have not seen. Some Tunisians found in a diseased apiary showed stronger powers of resisting disease than the English. I say this after a three years' test side by side with English, but these bees are terrors for propolising and stinging, and were

weeded out in consequence of their bad qualities.

I have imported many foreign bees and never yet had a case of foul brood from imported stocks. It may, I think, be taken for granted that more care is shown now than in former days by foreign breeders; in fact, I have, in my touring travels, seen queens from the A. I. Root Co., Doolittle, Henry Alley, Lawes, Lockhart, Hooper Bros., Malan Bros., and others, and in no case has disease sprung from these foreign imports.

Stocks this season are remarkably forward here in the North. I have never yet found them in such excellent condition; in fact, many colonies are needing supers to prevent swarming, they are so crowded. Trusting the season may prove a bountiful one.—J. GRAY, Travelling Expert, Lancs B.K.A., April 30.

BEES IN SUSSEX.

HONEY FROM THE LAUREL.

[6290.] Whilst walking past some laurels in my garden the other morning, I was surprised to notice bees working on them in large quantities. Being curious to know what they were getting I went closer, and saw that on the under side of some of the leaves, close by the stalk, there was a drop of sweet liquid each side, which the bees were gathering as fast as possible. It is evidently a secretion from the leaf, but whether it is "honey-dew" or not, I cannot say, but should like to know, if you would kindly tell me? I have not seen the "laurel" mentioned anywhere as yielding "honey-dew," so I thought perhaps you would let me know just what it is.

Bees around here are progressing very well, considering the weather we had last month, which stopped all outside work by the bees for about three weeks; but the conditions have now changed for the better, and the last three weeks have been all that bee-keepers could desire. All my stocks are in flourishing condition, and should, given a fair year, make a fairly good return.

My largest take of honey was last year (when the bees were located at Burnham-on-Crouch). The best stock yielded 95lb. of surplus, 55lb. being in sections. The average for all my stocks worked out to 85½lb. per hive.

Hoping I have not made this, my first letter, too long, with best wishes for a record year to yourselves and brother bee-keepers. I send name for reference and sign—P. A. J. W., Buxted, Sussex.

[It is known that bees gather the sweet secretion which exudes from a small protrusion on the underside of laurel leaves. —EDS.]

WASPS AND BEES IN S. AFRICA.

[6291.] Under separate cover we mail you a box containing samples of a species of wasp, which were sent to us by a customer residing a few miles from Pretoria. He informs us that these wasps infest his apiary in thousands, and attack the bees, mainly when they alight on the flight board as they are entering the hive, and either sting them to death or disable them so that they cannot fly.

They also rob the hives of honey, and cause general havoc amongst his bees, so much so that he contemplates giving up bee-keeping entirely unless some remedy can be found for destroying this pest.

Our customer wishes us to communicate with you with a view to finding out their life history, and the best means to adopt for exterminating them. During the day he employs a native boy in watching for their habitation; but, so far, no discoveries have been made. At night-time they are caught about the hives in hundreds with an ordinary butterfly-net, and that is how these specimens were taken.

A few lines of reply in the B.B.J. will greatly oblige bee-keepers out here. — CAIRNCROSS AND ZILLEN, Pretoria, April 7.

[We have forwarded the dead wasps to our esteemed contributor, Mr. F. L. Sladen, who is a skilled entomologist, and hope to have his views for publication in next week's issue.—EDS.]

Queries and Replies.

[3272.] *Mildewed Combs in Hives.*—On looking at my three stocks of bees I find they have come safely through the winter Nos. 1 and 2 are in cottager's hives, and 3 in a "W.B.C." On packing down for the winter No. 1 was very strong, the ten frames being covered with bees; 2 and 3 were not so strong, but each on 10 frames All the combs were then well supplied with honey, capped and uncapped. Early in March I gave to each hive a 2lb. cake of candy in glass-covered boxes. On examining all three stocks last night I find Nos. 2 and 3 very full of bees, and they had each made some new comb in the candy boxes, not only so, but there was brood in various stages, some being sealed over, and nearly ready to hatch out. On the other hand, No. 1, which was the strongest in the autumn, and best supplied with food, was found to be much weaker, the three outside frames being quite bare of bees and honey, but with large patches of mildew on the comb. These I removed and left the bees with only six frames, gave them some syrup, and covered them down warmly. Nos. 2

and 3 I supplied with a rack of sections each, and hope that they will soon be at work on them. 1. I hope to clean out their hives as soon as this cold wind ceases blowing. Meantime will you kindly tell me if I have done the right thing? 2. Can anything be done with the combs affected with mildew to fit them for future use I ask this question, because of being afraid that if I try to clean them the mildew will still taint the honey. 3. As several of the frames of comb put away for the winter have also become similarly affected, could you kindly say what steps I could take next year to prevent a recurrence of the same trouble? Mildew here is one of our great troubles, indoors and out. I cannot see any reference to this matter in the excellent "Guide Book", which together with the "B.B.J." has been of the greatest use to me. Thanking you in anticipation, I send name and sign CLERICUS, Canterbury.

REPLY.—1. Under the circumstances. Yes. 2. We expect the "mildew" complained of will be on the surface of pollen in unsealed cells of combs. If this is so, and there is not too much of it, the bees will clear away the mildew themselves. But in any case the honey will take no harm as feared. 3. The usual preventive of mildew is to remove all combs not well covered by bees; and in your case the latter must have dwindled very rapidly.

[3273.] *A Beginner's Queries.*—1. Since purchasing a stock of bees last autumn, I have been a subscriber to the B.B.J., and being somewhat anxious as regards the condition of my only hive, I have cut out the enclosed pieces of comb after thoroughly examining all the frames, and will be glad to have your opinion concerning them. 2. I could not discover the queen on the combs, but there were some capped cells of what I took to be brood. I also saw several bees enter the hive heavily laden with pollen; is that a proof that the queen is all right, even though I did not see eggs or young larvæ in the cells? This is my second attempt only at examining combs, so it is possible that I may have overlooked both the queen and signs of brood in the cells. I feel rather proud of the fact that I have managed so far without being stung. When examining combs I use the ordinary smoker, but find it is difficult to keep the fuel alight, and it usually goes out when most wanted. 3. Is there no plan of preventing this? I have also tried the carbolised cloth, but it seems to irritate the bees. Is this a usual result of using the cloth? 4. While referring to my overhauling the combs in the hives to-day, I find that many of the bees are infested with a very small red insect on their backs. What is this, and how can it be got rid of?—R. H. W., Brighton.

REPLY.—1. There is nothing wrong with comb sent. 2. Pollen-carrying by bees is usually a sign that breeding is in progress, but when there is any doubt, the combs must be examined for eggs or brood. 3. When properly prepared with brown paper —or other suitable material—so as to allow a free through draught, a good smoker will keep going as long as fuel lasts. You should, if possible, get a bee-keeper to prepare his smoker for use while you look on —all will go right afterwards. 4. The insect seen is, no doubt, the parasite known as Braula cœca or blind louse.

[3274.] *Mouldy Pollen in Combs.*—I have to-day examined two of my hives, and found the bees therein apparently healthy. I found in each of them, however, a patch of what I imagine is mouldy pollen, and I enclose a small piece for your inspection. I shall be much obliged if you can confirm my idea, and assure me that it is not foul brood. The lower half of the comb in question was almost filled with similar mouldy cells, but, as the upper half contained honey or sealed-over syrup, I did not like to sacrifice it. I have, therefore, cut away the lower half, and returned the upper part to the bees. I shall be grateful if you will kindly say: 1. Have I done rightly? 2. Does the presence of the mouldy pollen betoken anything amiss with my management of the hives during the winter? 3. Can you suggest what has caused the mischief, or any remedy for it? My bees were carefully packed up in November with sufficient stores, and have been kept as warm and dry as possible. I have been feeding them with syrup for about a fortnight, and they have plenty of stores. Both hives contained good patches of sealed-over brood, also larvæ and eggs. Thanking you in anticipation of reply, I send name, etc., and sign—W. F. S. Weybridge.

REPLY.—1. Without having done anything actually wrong, we advise you to fill the lower half of frames—from which comb was cut—with foundation attached to a strip of lath half an inch in width. Unless this precaution is taken the lower half of frame will probably be filled with drone-comb. 2. No; it merely shows that the comb in question has not been covered with bees during the winter. 3. The remedy against mouldy pollen is to remove all combs beyond those fully covered with bees when packing down in autumn.

[3275.] *Indoor Observatory Hives.*—I have a "Howard's" two-frame observatory hive which I want to work this season. In doing this would it be advisable to take two frames of brood and honey (both well covered with bees) from one of my existing

hives and put them into the above, then buy a queen and introduce her at the same time? Or would one filled frame and one frame fitted with new foundation be better? Also, would it be necessary to feed the bees at all? I ask this because there is no arrangement for feeding. I may also say there are no shutters to hive. Is it necessary to have them? What is about the right date to operate as above? Thanking you in anticipation of reply, I send name, etc., and sign—G. T. H., Croydon.

REPLY.—1. The hive mentioned has no doubt been made for use on the show-bench only, not as a hive in which to keep a stock of bees for any length of time. Indeed, it is not suitable for the latter purpose. It is possible to keep observatory hives indoors for several months in the year, but they require skilled care and a good deal of attention to feeding, etc., and should hold from three to six frames. Observatory hives intended for use altogether indoors are made with six or more frames hanging side by side in the ordinary fashion, with glass on all sides, and room for lateral movement, in order to show the queen. Such hives as this may be kept the whole year round, but those for temporary use are only supposed to be in operation while warm weather lasts.

[3276.] *Dimensions of Up-to-date Hives.*—I only commenced bee-keeping last year, and have been a reader of your JOURNAL ever since. I see you are willing to answer inquiries on bee-matters, and so I venture to ask if you could state the sizes of the different parts of an up-to-date frame-hive. I believe this information would please many of your readers, who, along with myself, would like to make one. I bought the "Book of Bee-keeping," but I think the information on that subject might be plainer. Trusting I am not asking too much.—JAMES BLACK, North Berwick, April 24.

REPLY. — The information asked for would occupy too much space for reply in this column. The "Bee-keepers' Practical Notebook," to be had from this office (price 1s. 1d. post free), contains full instructions to construct such a hive, also "How to Build a Hive Made from Used Boxes," and "How to Build a Bee-house," along with other information useful to bee-keepers.

[3277.] *Brace Combs in Hives.*—Would you please give me information on the following through the BEE JOURNAL. I bought a stock of Hybrid Bees in a frame hive last October, and when purchased it had a skep on the top of frames, which skep still remains as when received. But I now want to remove the skep as I prefer working with sections. Well, as April 18 was a very fine day I removed the skep in order to try and locate the queen; but on uncovering the frames I found them all stuck together with brace combs. I therefore wish to ask:—1. If I should remove the combs and replace with full sheets foundation, or cut them apart, and leave them as they are? I intend driving bees from skep into frames, which contain a lot of honey, and bees are a very strong stock. I have looked through back numbers of "B.B.J.", but don't find anything that meets my case. 2. Also would you give me name of secretary of the Yorkshire B.K.A. I send name for reference and sign.—CASTLEBAGH, Settle, Yorks.

REPLY.—1. Your best course will be to remove the brace combs from frames now in the hive, and make any renewal of combs after the present honey season is over. 2. The hon. sec. of the York and District B.K.A. is Mr. J. S. Gallimore, Estate Offices, Escrick, York.

[3278.] *Using Self-hivers and Transferring Bees from Cross-built Combs.*—I shall be much obliged if you will advise me on the following:—Last year, when expecting swarms, I fastened self-hivers to a couple of my hives, as directed, but no swarm came off, and I found that the self-hiver was crowded with drones, all of which were imprisoned and apparently could not escape, consequently they either died or were killed by the workers. What I ask is:—1. Will the same "drone-killing" always occur, even if used in May? Last year the hivers were put on at end of June. 2. Was any injury done to the colony by loss of drones, or was it the natural time for the bees to kill them off? I am away from home sometimes, and would like to use these self-hivers, if practical, but I see no mention of them in "Guide Book." I must also say that I am not an experienced bee-keeper, having only kept them for two years, but what stocks I have seem to be working very well, and ours is a fairly good district for honey. I have two hives that were not managed properly when putting swarms in them last year, and, in consequence, I cannot move the centre combs of brood-chamber. 3. Will it be possible to put another set of standard frames on top of the others fitted with foundation, and in the autumn drive all bees to second story, take away brood-chamber and place top one on floor-board? Hoping I have not taken up too much space with my question. I send name and sign—MAC, Salisbury, April 30.

REPLY. — 1. It is certain that drones must be imprisoned in any receptacle that will prevent the escape of the queen-bee. Therefore, the drones found in the self-hiver would no doubt perish there from cold and want of food, and not be killed off by the workers. 2. Getting rid of superfluous drones is generally of advantage to the colony from which they

are taken. 3. Instead of putting the new set of combs (fitted as proposed) on top of the present ones, reverse the position by setting the present body-box on top. The bees will then work down on to the new frames and establish the brood-nest below, and as brood hatches out in the old frames they will be fitted with honey, for removal at close of the season for extracting.

INSTRUCTION IN BEE-KEEPING.

COUNTY COUNCIL'S INSTRUCTOR APPOINTED.

The following appears in *The Western Morning News* of the 18th inst.:—The Cornwall County Council has appointed Mr. Cardell Williams, St. Erth, bee instructor for the county, and he will immediately take up his duties. Mr. Williams was formerly bee expert for the Cornwall Bee-keepers' Association, but on the passing of the Education Act of 1902 the Council undertook to look after bee-keeping in the county, and have now decided to engage an official, who will visit the apiaries of the county, report on the same to the secretary of technical instruction, and give lectures and instruction where necessary in bee centres. The new instructor will also provide the County Council with all information required on bee-keeping in Cornwall. It is to be hoped that bee-keeping will now once more flourish in the county. For the last few years disease has so ravaged the hives that the industry has reached a low ebb.

Notices to Correspondents & Inquirers.

Letters or queries asking for addresses of manufacturers or correspondents, or where appliances can be purchased, or replies giving such information, can only be inserted as advertisements. The space devoted to letters, queries, and replies is meant for the general good of bee-keepers, and not for advertisements. We wish our correspondents to bear in mind that, as it is necessary for us to go to press in advance of the date of issue, queries cannot always be replied to in the issue immediately following the receipt of their communications.

NOVICE (Minchinhampton). — Super Clearers. — The particular form of clearer mentioned (with eight bee-ways) is made only by Messrs. Jas Lee and Son, Martineau Road, Highbury, London.

(REV.) C. V. R. (Blandford). — County B.K.A. for Dorset.—There is no Bee-keepers' Association for Dorset.

Special Prepaid Advertisements.

Twelve words and under Sixpence: for every additional Three words or under, One Penny.

Advertisements for current Issue must be received by first post on Tuesday.

SALE BY AUCTION (owing to removal) on MAY 10, at ONE o'clock, the whole contents of the successful apiary of Mr. J. Jones, Wegber Quarry (three miles from Carnforth, Lancs), consisting of splendid stock of healthy bees, in good hives, honey extractor, wax ditto, honey ripener and strainer, lot of honey tins, and other appliances. All in good condition. Also 500 shallow frames of drawn-out comb. The apiary entirely free from foul brood.—For particulars apply 5, West Leigh Lane, Leigh, Manchester.

FOUR NEW "W.B.C." PATTERN HIVES, 12s. 6d. each.—PRITCHARD, Wainalong Road, Salisbury. o 37

FINEST ENGLISH HONEY, 50s. cwt. Sample 2d.; tins free.—DUTTON, Terling, Essex. o 18

I AM NOW BOOKING ORDERS for early Natural Swarms of my well known strain of Bees. Early application is desirable. First come, first served. 3lb., 10s. 6d.; 4lb., 12s. 6d.; 5lb., 15s. Boxes charged 3s. each if not returned. Health and safe delivery guaranteed.—CHARLES H. BOCOCK, Ashley Apiaries, Newmarket. P 11

LIGHT COLOURED ENGLISH CLOVER HONEY, in 1lb. screw cap jars. Sample 2d. — F. W. FRUSHER, Crowland, Lincolnshire. P 10

FOR SALE, TWO STRONG STOCKS, one in New Century Hive, one on eight frames.—Particulars TURNER, Gasworks, Amersham. P 9

QUEENS.—Beautiful Hybrid Cyprians for Queenless Stocks, 5s.—DAWKINS, Four Oaks, Birmingham. P 8

GARDENER SEEKS SITUATION as Single-handed, or where help is given; have had life experience in all branches of kitchen, stove, and greenhouse; well up in chrysanthemums; six years in present situation, with good references of present and past situations; life abstainer; age 26.—FISHER, 38, Mornington Road, Wanstead, Essex. P 7

FEW QUEENS, Sladen's hardy and prolific strain, 5s. per return post.—BARLOW, Hartshill, Stoke-on-Trent. P 6

FOR SALE, owner going abroad, 70 Shallow Combs, in perfect condition, 6d. each; 6 Queen Excluders, 6d. each; Observatory Hive, three-frame, 10s.; 1 Super Clearer, ten-frame size, 1s. 6d.; 1 Wells ditto, 1s. 6d.; Honey Tins, 15 and 25 lbs., 4d. and 6d. each; 1 Wells Hive, with lifts and supers, complete, 15s.—ALFRED HALL, Many Pitts, Merton, Blackpool. P 5

PRIME NATURAL SWARMS FOR SALE, this season, as usual, 12s. 6d. and 15s. each; cases to be returned. Please note change of address (telegrams, Wilkins, Letcombe Regis).—PERCY WILKINS, Letcombe Regis, Wantage. P 4

STRONG STOCKS in well painted Standard Frame Hives, 32s. 6d.; ditto on eight frames, 23s.; 1905 Queen, guaranteed healthy. Orders booked now for swarms. Sola Wax Extractor, 7s. 6d.—W. WOODS, Normandy, Guildford. P 3

GUARANTEED STOCKS, 15s. 6d.; Swarms later, 12s. 6d.; Foundation Machine.—70, Highgate Road, Birmingham. P 2

WANTED, Offers for Patent Gallon BUTTER CHURN; practically new; cost one guinea. Wanted, Bees.—ARTHUR CROWTHER, Gomersal, Leeds. o 100

FOR SALE, new WELLS' HIVES, complete, 21s.; Guinea Hives, complete, 12s. 6d.; Nucleus Hives, 3s. 6d.; all well painted.—THE APIARY, Woodmancote, Cirencester. o 99

ORDERS TAKEN NOW FOR SWARMS.—May, 3s.; June, 2s. 6d. per lb.—HENRY SMITH, Woodmancote, Cirencester. o 98

SWARMS! SWARMS!! SWARMS!!!—100 for sale, strong and healthy, 2s. per lb.—E. BENNETT, The Apiary, Heacham, Norfolk. o 97

FOR SALE, at Lewes, Sussex, FIVE STOCKS of BEES, in good Bar Frame Hives, £1 1s. each; or £4 10s. the lot. Would take pullets in part exchange.—Write NORRIS, Hare Street, Romford. o 96

STRONG STOCKS OF HYBRID BEES, on ten Standard Frames, £1; a bargain.—E. HOWARD, 1, Drewstead Road, Streatham. o 95

SWARMS OF BEES, May or early June, 2s. 6d. per lb.—REV. C. S. ROWLAND, Chettle Rectory, Blandford, Dorset. o 94

Editorial, Notices, &c.

SCOTCH HEATHER HONEY

AT LESS THAN 3D. PER LB.

The communication under the above now familiar heading, which appeared in our issue of last week, is of such direct importance to B.B.J. readers, and to bee-keepers as a body, that we now refer to the subject in fulfilment of the promise made by ourselves last week. In doing so, we shall confine our remarks to the letter which appears on page 171, as stating the case of Messrs. Ingram Bros. from the legal standpoint taken by their own solicitor.

First, then, let us say that no one has, so far as we know, ever stated that the honey in question was not "absolutely pure." On that point, therefore, we are all agreed, but what Scottish bee-keepers, and all others who have any regard for the good of British bee-keeping, take exception to is the definite statement that it is "pure Scotch heather honey."

We can ourselves add some force to the view taken by Scotch bee-men by stating that our opinion was asked, with regard to the honey referred to, as being of more than ordinary value, because of the scores of samples of various honeys from all sources which are sent to us every season for an authoritative opinion on quality, source, etc. This being so, we examined the sample, and unhesitatingly declared that it was not Scotch heather honey at all. The question, therefore, before us is—What can be done to settle the point in dispute? and we repeat the suggestion already made that it may be definitely settled by Messrs. Ingram Bros. We were given to understand that the honey was gathered in the apiaries of bee-keepers located in Scotland, and sold by them to someone representing the wholesale dealers. The latter then put up the honey in barrels for sale by the cwt. This being the case, our suggestion is that Messrs. Ingram Bros. should give the name and address of two or more of the men whose bees gathered the honey. We would then take steps to verify the *bona fides* of the parties concerned, and publish the result in the BRITISH BEE JOURNAL.

ESSEX AND SUFFOLK B.K.A.

TWENTY-SIXTH ANNUAL MEETING.

The annual general meeting was held at the Devonshire House Hotel, Bishopsgate Street, London, on March 30, Dr. Elliot in the chair, and amongst those present were C. Harding, Esq. (vice-president), Mrs. Ford, Messrs. G. F. Faunch, W. P. Jobson, A. W. Salmon, T. W. White, and the secretary, Mr. G. R. Alder.

The report and balance-sheet was presented and passed unanimously. The election of officers followed. The Countess of Warwick was re-elected president, as were the vice-presidents, viz., the Bishop of Colchester, Sir T. Fowell Buxton, C. N. Brooks, Esq., Col. Davies, C. F. Harding, Esq., Owen Parry, Esq., J. H. Tritton, Esq., J. R. Roberts, Esq., J.P., Miss Willmott, Hon. Rosamund Hanbury, and Mrs. Hughes. The committee for the ensuing year are: — Messrs. J. Chesson, A. H. Dearden, O. Puck, C. B. Snelling, J. R. Pulham, F. G. Kimber, A. W. Salmon, T. W. White, W. J. Sheppard, Dr. Elliot, and Mrs. Ford. The experts engaged for the year are Mr. Jas. Herrod (Essex) and Mr. J. Price (Suffolk). Mr. G. R. Alder was re-elected secretary and treasurer.

The secretary reported his inability to obtain a grant from the Local Committee of the Essex Agricultural Society towards holding a honey show at Brentwood in June, but as the parent society were willing to make their usual grant it was decided that demonstrations of bee-management with the bee-tent should be given.

An exhibition of bee-appliances and interesting objects connected with apiculture was also arranged for. The meeting closed with a vote of thanks to Dr. Elliot for presiding. — G. R. ALDER, Secretary and Treasurer.

Correspondence.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

**** In order to facilitate reference, Correspondents, when speaking of any letter or query previously inserted, will oblige by mentioning the number of the letter as well as the page on which it appears.*

NOTES BY THE WAY.

[6292.] The merrie month of May has come, and along with it the cuckoo. We have also had a higher temperature, but, unfortunately, no increase of sunshine. During the whole of Sunday last, though the thermometer registered from 50 to 60 deg. Fahr., no glimpse of sunshine appeared and, consequently, no bee-work, except water-carrying, was done in the apiary. I hear of more cases of spring dwindling this year than usual. One writer asked if I can account for it. My reply is—Yes. The continued cold weather during April

(except three days at Easter-tide) is the primary cause. The stock is weak in bees, with possibly only a small reserve of food in the brood-combs and an aged queen. It is well known to experienced bee-keepers that in such a case breeding does not begin till the majority of the bees have become aged and worn out; and when a start is made, the foraging bees have to go a long distance for water, and further still for pollen in treacherous weather. Consequently, numbers of willing workers go forth never to return; they become tired with their hard work, and, if a rest is made, the cold so rapidly chills the weary bees that they are unable to take wing again, and so perish. Thus the loss of adult bees overbalances the young bees hatching out from the small patches of brood, and the colony dwindles away, or is robbed out.

As the month advances, brood-nests need enlargement. Give a full sheet of foundation in centre of brood-nest, and another sheet in a few days, or as soon as they have drawn out the comb in first one. Should the weather be cold and wet, give a bottle of syrup to keep the bees comb-building, but with good bee-weather feeding will not be needed where the bee-forage is fairly good.

Strong colonies must not be allowed to run short of food if they are to be overflowing with bees a month hence, when the honey harvest opens. Should the weather be unsuitable for bee-work in the fields, a little syrup may be given in the open every day; thin watery stuff will do, and this will not start robbing. This advice may appear foolish to some bee-keepers who are located in good early districts, where the only want is sunshine, but in less favourable places a few days' shortage of food may restrict oviposition, and throw the whole colony back a fortnight, which may mean practically the loss of a season to the bee-keeper.

Preparing for Swarms.—In early districts swarms will soon be coming off, and purchasers should get the hive ready for them by fitting frames with foundation, with quilts and wraps at hand, and hive-stands made level, to make sure that combs are built *inside* the frames. When the swarm arrives see that the bees are all right, and if from a long journey by rail give them a bottle of syrup. This will warm them up and put them in a good humour ready for hiving, which should be done in the afternoon, when possible. Then, after the bees are settled down in their new home, give the newly-hived swarm a bottle of syrup. This will induce them to take to their new quarters and begin comb-building. If a honey-flow is on, no further feeding will be wanted, but if the weather is cool or wet, continue feeding for a week, or till the weather improves. This done, the stock will soon be ready for its first super, and the trifling trouble and expense will most likely be a good investment for the bee-keeper, and return him a rack of sections or a box of shallow-frames the same season.—W. Woodley, Beedon, Newbury.

WASPS AND BEES IN S. AFRICA.

[6293.] The very interesting "wasps" from Pretoria are solitary sand-wasps, belonging to the genus *Palarus*. There are eleven females and two males, all of the same species. My collection contains several specimens of what appears to be the same species, taken by Mr. J. Martin at Port Elizabeth, Cape Colony, on July 6, 1901, in the act of hovering round his hives and catching and carrying off the bees, no doubt as food for their young. Mr. Martin's letter describing the depredations of these insects and my notes on them, with a sketch I made of them, appeared in the B.B.J. of August 22 and September 5, 1901, and have been reprinted in condensed form in an appendix to my book, "Queen-Rearing in England." The only remedies I can suggest are to try to trap them, and to find the nests, which are not likely to be more than a few hundred yards from the hives, and to destroy them at night. I have not been able to get any information about the nesting-place of *Palarus* (there is no British species), but most of the British sand-wasps make their nests in burrows in sandy ground, and not a few of them nest gregariously. Should *Palarus* nest in this way the work of finding and destroying the nests ought to be fairly easy. Unfortunately, it is of no use to cover the hives with nets, because the *Palarus* is slightly smaller than the bees. I am relaxing the specimens for the purpose of examining them carefully, and if I find them to be of a different species to those received from Port Elizabeth I will report it to you.—F. W. L. Sladen.

WINTERING BEES WITH SUPERS ON.

[6294.] I should like to ask your correspondent, "R. L." (6287, page 176), who writes in last week's B.B.J., whether in wintering with a rack of shallow-frames over body-box the queen-excluder was removed or left in position between the body-box and super? A friend of mine, who also thought it a good plan for wintering bees, does not think so now! He fell into the pitfall of leaving the queen-excluder in position, the consequence being that the cluster of bees took to the shallow-frames, leaving the queen below to perish with cold. My friend, taking his first peep at this stock, thought, like "R. L.," that the plan was a great success, seeing the

super packed with bees; but, alas! on further examination below, the truth revealed itself of a queenless hive. Has "R. L." satisfied himself that all is well downstairs? He should let us know the actual plan as regards the excluder, as I consider it most dangerous for inexperienced bee-keepers to read these experiments if the tale is only half-told.

Stocks in Romford, generally, are commencing fairly well, and supers should be on towards the end of the month, providing we get some nice warm rain, which is badly needed. We shall then get abundance of apple-bloom, followed by chestnuts and clover, to the last source—viz., the limes.—R. J. T., Romford, Essex, May 5.

FOREIGN v. NATIVE BEES.

[6295.] I think all readers should be grateful to the Chairman of the B.B.K.A. for giving his experience of, and opinion on, foreign bees and queens at the conversazione. We hear from time to time of imported queens being very prolific; but on looking over my last year's "notes" I find that some of my native queens had, in six weeks from the time of forming nuclei, patches of sealed brood six inches in diameter, and extending to four frames. Not only so, but by stimulative feeding in spring till mid-May I got ten or more frames full of brood. Bees raised from such nucleus colonies are on the wing by mid-June, just when limes and white clover are at their best. Do foreign bees beat that?—A. Harris, Wavendon, May 4.

SALT ON FLOOR-BOARDS.

[6296.] In the B.B.J. of May 3 (6287, page 176) your correspondent, "R. L.," writes some "Useful Notes on Bees," and questions the use of salt on floor-boards. He says: "Then on a fine, warm morning I transfer bees and frames to clean hive, not forgetting to sprinkle a little salt on floor-boards, and put on each pieces of naphthaline as well."

The latter (the naphthaline) I am always careful to use, but the salt I feel afraid of it in that place. Kindly put me right. I get my lessons from the B.B.J.

Wintering Bees.—Some months ago one of your correspondents, in writing about his bees, said that he "wintered one or two stocks with a rack of shallow-frames above them instead of packing down closely with quilts over the body-boxes. I determined to try it, etc., etc. Well, Sirs, this is to-day the strongest and best stock I have."

I ("W. C. H.") am one of your readers who for the last three winters has done the same (wintered with a super of shallow-frames in place), and like it so well that I shall continue to do so. Thanks to my teachers in the B.B.J.—W. C. H., South Devon, May 5.

BUYING STOCKS OF BEES.

[6297.] May we be allowed to direct attention to the carelessness shown by some of your advertisers in offering stocks for sale as healthy, when no steps have been taken in order to ascertain whether the bees can be correctly so described? We have had to refuse several apiaries offered us for this reason.—James Lee and Son, May 4.

[We add a line to say other correspondents have made the same complaint, and we strongly advise that readers should insist on having a guarantee when purchasing.—Eds.]

FIRST NATURAL SWARM OF 1906.

[6298.] I hived my first natural swarm of bees to-day. Is not this rather early, especially seeing the cold weather we have had of late? I may say it came out of a skep kept purposely for supplying me with swarms.—W. E. S., Defford, near Worcester, May 5.

AMERICAN AND COLONIAL PAPERS.

EXTRACTS AND COMMENTS.

By D. M. Macdonald, Banff.

Improvement of Stock.—If bee-keepers would only spend half as much time over this question as they do over some other things, the whole bee-keeping world would be better off. Better bees, with better bee-keepers, of course, will mean increased yields—larger returns and larger profits. New blood should be procured and introduced into the yards. Some good breeders, and then some *good breeding*, would make it possible to produce honey-gathering strains that would be profitable to their keepers. This, from the *American Bee Journal*, shows that they want better queens over there. Judging by specimens coming over to this side, they frequently breed in a happy-go-lucky way. Breeding for colour and fair looks bids fair, I fear, to extinguish any attempt at keeping in mind the much more important question of honey-gathering. So that it can be said of these consignments, as is currently reported of Continental queens, "Not one in ten turns out first class!" Home breeders, as well as the average run of apiarists, might read and deeply ponder over the wise words spoken by Messrs. Cowan, Carr, and Herrod at the late conversazione. A great deal too much is also being made of age of queens. Dr. Phillips even goes the length in his re-

cently-issued bulletin of asserting that "it is held by the best bee-keepers that it is necessary to restock all colonies with new queens *every year*." I will be very much surprised indeed if one out of every three leading bee-keepers will unreservedly endorse this very pronounced and extreme opinion. Most good queens are *best* during their second year!

New Races.—Closely allied to this question of improvement is that of introducing novelties. The *American Bee-keeper* has this to say on this moot point:—"It is doubtful whether it is a good policy to flood the country with these bees. When it has proved that it is equal in honey-gathering qualities to the other good races we have, then, it seems, would be the right moment. I want a honey-bee that can sting. This peculiarity of our honey-bee has its good points, and I would not miss them." Mr. Simmins, on the same page, says:—"It appears to be a law that queens which produce very gentle bees are not worth much for honey-producing qualities. Cross either Carniolan or Italian with the black bee and they store three or four times the quantity of honey, though better stingers one will not desire." Perhaps Dr. Miller had, therefore, better stick to his cross hustlers — at least until something better turns up.

"*Worth a Guinea a Box.*"—The *Canadian Bee Journal* says:—"M. R. Smith takes as a morning nip a couple of teaspoonfuls of honey in a cup of hot water before breakfast. We have tried it (says Mr. Craig) on his recommendation, and have found it excellent as an appetiser. It is sedative, and for children, in this way, it is also slightly aperient in effect —better than patent medicine."

Size of Hives.—Quite recently I gave an American opinion of high value in favour of hives shallower than our standard. Here is an extract from a leading article in the *Australasian Bee-keeper*:—"It is not only particularly adapted to the requirements of the specialist, but is also the best hive for the farmer bee-keeper, and the amateur. I write from the standpoint of one who has been working 200 Langstroth hives for many years with financial success. After making comparative trials my verdict is in favour of the 'Bolton' in nearly all particulars." It should be remembered that the last-named hive is considerably shallower than our standard. Taken to heart, these expert opinions should serve as a beacon to warn deep-frame men from plunging too deeply lest their last state should be worse than their first.

Bees and Poultry.—A writer in *Gleanings* pleads that these should go hand in hand: "My advice is to try both bees and poultry in a small way at first, if you live near a good market for eggs and honey; then if you can succeed at both you have a double income. My bees produced an average of 70lb. per colony. From 140 hens I had 390 chickens, 1,464 dozen eggs, yielding 412 dollars. Deducting food 224 dollars, the profit would be £40." Evidently poultry can be made to pay.

A Warning. — J. A. Green says: — "Please remember that a colony 'slightly diseased' with foul brood *has foul brood*, and can convey the disease just as certainly as one that is badly diseased. The difference is only one of degree. To manipulate even the most slightly diseased along with healthy colonies is gambling on an uncertainty and against heavy odds, since, if you lose, your loss is apt to be far greater than anything you would gain if you won." Many, if not most, are unable to detect the disease in the incipient stage, and even amongst the experienced judgments vary as to what constitutes a "slightly diseased" colony; so, in making any examination at this time of the year, err on the safe side, because it progresses with giant strides this and next month, and a colony may run down to a hopeless condition even in a few weeks.

A Saving in Foundation.—M. Scholl believes in economising by using only thin foundation:—"The lighter grades rightly used are better for all purposes. It seems like a waste to use heavy brood, or even medium brood, in wired frames. I have used with much satisfaction home-made foundation, having twelve Langstroth sheets to the pound. This was used with four horizontal wires, but the wires *were not imbedded* (note italics). The sheets simply hung between the wires, two of the wires on each side, alternating with those on the other side. If the frames are wired right, and the hives stand level, the imbedding is not necessary, as it weakens the foundation so that it breaks loose at the wires."

HOMES OF THE HONEY BEE.

THE APIARIES OF OUR READERS.

We are very pleased to include the photo graph sent by Mr. Cairncross, of Pretoria, in our "Homes of the Honey Bee," together with the interesting notes of his visit to the Orphanage at Irene. The fact of so excellent an institution being established and maintained by the Transvaal Government is highly gratifying to us, especially when so prominent a place in the teaching at the Orphanage is given to bee-keeping on modern methods. It will no doubt result in raising up in the Colony a race of good bee-men whose useful work will be heard of in the future.

"Having frequently been invited to visit the Transvaal Government Orphanage at Irene, and as the morning of April 1

this year was beautiful and sunny with cloudless sky, my wife and I decided to spend the day at the above-named institution, and—armed with a camera—we started from Pretoria soon after breakfast. The Orphanage is situated about twelve miles in a southerly direction from Pretoria, and we travelled in a comfortable "Surrey," skirting the Johannesburg Railway line, until the Irene railway station was reached. Here we turned to the right, passing through the magnificent Irene Estate (now occupied by Mr. Van der Byl), with its charming residence, lovely flower gardens, well-cultivated lands, and immense fruit-orchards, our journey continued amid hundreds of acres of dense bush and forest of wild trees, through which a river with an abundant supply of sparkling water winds its way until it eventually reaches the sea.

"The Orphanage now comes in view, and a few minutes later we arrive, after a two hours' most enjoyable drive.

"The genial master, Mr. H. A. Beardmore, and his charming wife—the matron—gave us a hearty welcome, and, after a short rest and light refreshments, conducted us all over the establishment. The Orphanage consists of thirty-two detached buildings, built in a square, with a large space in the centre, around which, on the inner sides, runs a broad and well-kept carriage drive.

"The various buildings are occupied by a staff consisting of the master and matron, assistant school teacher, nursing sister, laundress, and cook, along with eighty children, thirty-five being girls and forty-five boys. A non-resident doctor makes frequent calls, but the situation is so generally healthy that his services are seldom required.

"This Orphanage was established by the Government at the close of the Boer war, when the burgher camps were disbanded or broken up, and I am informed about 50 per cent. of the children are Dutch. The children are provided with everything in the way of clothing, beds and bed linen, furniture, and a plentiful supply of good food, and, along with a sympathetic staff, it may be safely said that their lives are comfortable and happy.

THE TRANSVAAL GOVERNMENT'S ORPHANAGE APIARY, IRENE, SOUTH AFRICA.

"In connection with this institution there is a large schoolroom, the principal being Mr. Beardmore, with Mrs. H. Cox as assitant teacher; the latter also gives lessons in needlework, etc., to girls, while the boys are taught shoemaking, carpentering, and other useful trades, and, when old enough, situations are found for them in a similar plan to that adopted at Dr. Barnardo's Homes.

"It may be wondered how a description of this Orphanage can interest readers of THE BRITISH BEE JOURNAL, but if, as I hope, you will give the enclosed photo a place in the 'Homes of the Honey Bee,' the appropriateness of it will be admitted.

The twenty-five hives seen are located in the large square referred to, and were all made by the boys of the Orphanage, the eldest of them (Dan Roux) being only fourteen years old; and I am sure bee-keepers who are men will credit the youngsters with their good workmanship. They are accurately made to take the B.B.K.A. standard frame with the usual metal ends, and have gabled roofs with cone-shaped bee-escapes. It is quite certain that the Orphanage bees are quite contented with their homes, judging from the pleasant hum and busy way in which they were working.

"It may perhaps interest your readers to know how this apiary was started, therefore I give the particulars as supplied by Mr. Beardmore:—About twelve months ago a swarm of bees took possession of one of the dormitories, and on this being made known to a Kaffir man-servant he informed the principal, and invited him to come and see the new visitors. This he at once did, and on the native saying, 'Boss, we must keep these bees,' his master assented. He then ran off, and soon afterwards returned with an empty Nestlé's milk-box, into which he hived the bees with complete success. The children, who had been interested onlookers, were in high glee, delighted with the idea of catching and hiving bees in this way, and ere long, when opportunity offered, they scoured the veldt in search of swarms, and were successful in finding several colonies located in trees, crevices in rocks, ant heaps, and elsewhere. On these discoveries being reported to the master he bought an English hive for use as a model, also the 'British Bee-keepers' Guide Book,' and then gave his head boy, Dan Roux, instructions how to proceed with hive-making, assisted, of course, by a great number of other youngsters, and hive-making was soon in full swing.

"I send you several photographs taken by myself, which, unfortunately, are not very good, but you may consider some worth publishing.

"Amongst them is an observatory hive on the verandah, also made by 'Dan,' containing one standard frame with brood in all stages, and above sixteen sections, nearly all filled. We spent an interesting half-hour watching the queen going from cell to cell depositing eggs, and also watching young bees emerging from the cells.

"The late Lieut.-Governor, Sir Arthur Lawley, and Lady Lawley who is a bee-keeper—were frequent visitors at the Orphanage, and when they were leaving South Africa her ladyship presented Mr. Beardmore with her three colonies of bees. The present Governor and High Commissioner, Lord Selborne, now visits the institution, accompanied by Lady Selborne, and are much interested in the apiary. Another visitor is the Hon. the Chief Justice, besides other distinguished personages.

"Apiculture is taken as one of the school subjects, and is systematically taught. To make this more interesting, sketches, paintings, and drawings are entered, along with all their notes on the subject. This, with the practical experience in the apiary, gives the children a keen interest in the work. And to further illustrate his subject, Mr. Beardmore takes these boys to the apiary and gives them practical lessons in manipulating the bees. His idea is to give boys a 'hobby' in life, and bee-keeping he believes will not only prove an interesting pastime, but will also be remunerative.

"At the present time honey in 1 lb. sections is retailed in shops at from 2s. to 2s. 6d. per section, shallow frames 5s. 6d. each, and liquid honey in quart bottles 2s. to 2s. 6d.

"Mr. Advocate Benson (a great bee-enthusiast) recently gave the children a lantern slide exhibition and lecture on 'Bee Life,' which I understand was a great success.

"The writer, being personally interested in bee-keeping, having a few colonies himself, and having imported Italian golden queens with success for breeding purposes, you can therefore understand the interest he takes in bee-culture.

"Wishing your paper every success, which I am sure it deserves, and as a constant reader I may say that I frequently am indebted to it for very valuable information.

APRIL RAINFALL.

Total fall, 1·17 inches.
Heaviest fall, ·31 inches on 24th.
Rain fell on twelve days.

W. Head, Brilley, Herefordshire.

WEATHER REPORT.

Westbourne, Sussex,
April, 1906.

Rainfall, ·85 in.	Minimum on grass, 23° on 20th.
Heaviest fall, ·24 in. on 27th.	Frosty nights, 9.
Rain fell on 10 days.	Mean maximum, 54·5.
Below average, ·84 in.	Mean minimum, 35·5.
Sunshine, 244·7 hours.	Mean temperature, 45·0.
Brightest day, 27th, 13·1 hours.	Below average, 1·1.
Sunless days, 0.	Maximum barometer, 30·54 on 9th.
Above average, 60·2 hours.	Minimum barometer, 29·39 on 28th.
Maximum temperature, 65° on 10th and 11th.	
Minimum temperature, 25° on 20th.	

L. R. Birkett.

Queries and Replies.

[3279.] *A Lady Bee-keeper's Queries.* — Will you kindly reply to following questions in the B.B.J.? Last summer, two separate swarms from a neighbour's hives left his garden and of their own will entered two of my hives. I had to pay for the bees; not only so, but I found the man unreasonable about them. I therefore ask: — 1. What was the cause of their coming, and what can I do to prevent his bees from doing the same again? 2. Can you tell me where to purchase a "Wells" hive, and does it answer when working entirely for sections? I now work my hives wholly for sections, but would be glad to know if it is more profitable to work for both sections and extracted honey, and if I decide to do so, what quantity of honey should be left in the body-box as food for the bees? 3. Can I get both sections and extracted honey from the same hive, or must one or the other be chosen and adhered to? 4. I am afraid there is something wrong with three of my hives, and am sending a sample bit of comb for your opinion if there is foul brood in it. 5. Does our native bee extract honey from red clover and the blossom of the field beans? If there is anything to pay for above advice please let me know the amount. I send name and sign — North Connel, Argyllshire, May 1.

Reply. 1. The only thing you can do to keep stray swarms from entering empty hives is to keep the entrance closed against intruders. Some bee-keepers are unjust enough to prepare their empty hives for swarms and leave the entrances open as "decoys" for swarms belonging to neighbours. 2. It is quite common to see "Wells" hives advertised for sale in our prepaid columns; in fact, one such appeared last week. But most leading dealers stock these hives. You would however, be wise to gain more knowledge of modern bee-keeping before trying the "Wells" system of working. In experienced hands it answers for any form of honey. 3. Most bee-keepers regulate their methods of working according to their market, but it is well known that a far heavier yield of honey is got by the extracting system compared with sections. It is quite easy to secure both comb and extracted honey from the same hive, if desirable to do so. 4. The comb sent shows foul brood of old standing. 5. The ordinary brown or native bee works on the field bean, but does not gather honey from red clover, though it frequently works on the second crop or "aftermath" of that plant, which is usually mixed with alsike or hybrid clover. We make no charge for advice given in the B.B.J., but it would be a profitable investment for you to procure a copy of the "Guide Book," seeing that the above queries are so elementary in character as to make it clear that modern methods are beyond your present knowledge.

[3280.] *Using Combs Containing Drone-brood.*—I have several frames of comb removed from a queenless hive, with drone-brood in cells of all ages, probably from a laying worker. These frames have also a good deal of honey in them. 2. Would it be advisable to use these for brood-spreading in the ordinary way it is done in spring? Would bees remove this old and chilled brood, and utilise the space in a profitable manner? Reply in B.B.J. will oblige. Name sent for reference.—W.A.T., Honiton.

Reply.—1. We should on no account use combs containing dead drone-brood in the way proposed. For preference, let the honey in combs be given to the bees, and burn the dead brood, combs, and all, after the honey has been cleared out by them.

[3281.] *Using Clean Combs from Diseased Stock.* — I have just destroyed a stock of bees which was affected with foul brood, and some of the combs at rear of the hive were nice and clean, without a trace of disease in them. I should therefore like to know if these combs will be fit for use if disinfected with soluble phenyle? I think the B.B.J. is a very valuable magazine for bee-keepers, especially to beginners, and I shall recommend it to my bee-keeping friends. —H. W., Licermere, Bury St. Edmunds.

Reply.—If the combs in question have never been bred in they will be suitable for use, if well sprayed as directed in "Guide Book." Thanks for your appreciation of B.B.J.

[3282.] *Buying Bees in Frame-hives.*—1. I am about to buy a strong stock of bees from one of your advertisers, and being only a beginner I would like to know if the bees should be allowed to fly at once on arrival, or is it necessary to confine them to the hive for a time? One of my hives is, I fear, queenless, as I can see no brood or eggs, and the bees only cover about three frames. 2. Is this to be taken as a sign of queenlessness, and, if so, do you advise me to purchase a queen for immediate introduction? Replies to above in next issue will greatly oblige. I send name, etc., for reference, and sign— E. S. H., Totteridge, Herts, May 6.

Reply.—1. The hive should, if convenient, be settled on its permanent stand, and bees released after sundown. It is safer for a beginner—who owns other stocks besides the newcomers — to have no bees flying about wildly perhaps when entrance is opened. You should take the

ordinary precautions when buying stocks to have a guarantee with regard to healthiness, and also that the bees are on standard frames. 2. It is hardly worth while to buy a good fertile queen for introduction to a weak lot of bees. Better to purchase a nucleus colony and unite the queenless lot to the latter if you are perfectly sure that the stock is queenless, and that there is no foul brood in the combs.

[3283.] *Drone-breeding Queens in May.*—Referring to my query of April 11 (3260, page 157) about my stock, which was at that time in good condition, and your reply thereto, I now write about the same hive, because of my fear that something has happened to the queen. There was plenty of worker brood in the combs when I examined it on April 11, and now there is nothing but drone-brood in the cells, while some of it does not look healthy. There are also a few dead bees in the combs. I send sample of comb and ask:—1. Would you please say if it is foul brood or disease of any kind? 2. If there is no disease, should I purchase and introduce a queen to the stock? 3. If, on the contrary, there is foul brood in the combs, should I destroy the bees and combs? I send name and sign —Inchcape, Arbroath, May 3. P.S.—As I am a new subscriber to the B.B.J., if there is anything to pay for this examination I will willingly send it.

Reply.—1. There is no disease in comb. 2 and 3. Your description of the stock's flourishing condition, when examined on the 11th ult., gave us the impression that the queen was doing very well indeed and that she would do equally well in the coming season. But the present state of things makes it pretty clear that the queen has seen her best days, and is now a worthless drone-breeder, for all the sealed drone-brood is being raised in worker cells. The sooner therefore she is destroyed the better. If bees are fairly strong a good queen should be introduced.

[3284.] *Helping to Stamp Out Foul Brood.*—I am sending two samples of comb, numbered 1 and 2. I feel sure they are affected with foul brood, but want to have your opinion. They are from hives belonging to different bee-keepers, who are neighbours of mine here, and I am the only one who knows anything about bee diseases, or, indeed, very much about managing bees at all on modern lines. But having gained my knowledge solely from the "Guide Book" and the B.B.J., I am on pretty safe lines myself. I think it speaks well for the books mentioned, for I have sent several samples to the B.B.J. office, taken from hives I have suspected, and have never yet been wrong in my opinion. In conclusion, I am sorry to say we have foul brood very bad in this district, solely through ignorance of the disease on the part of bee-keepers about. Both men from whose hives samples were taken are willing for me to destroy the bees if diseased.—J. Roper, Erith, May 1.

Reply.—Both samples sent are badly diseased, No. 1 especially so; indeed, it is simply rotten with foul brood, so we need hardly say how readily you should avail yourself of the chance to burn the lot as soon as possible. It is very good of you to help your neighbours in this way, and we trust you will persevere in the work.

[3285.] *Pollen on Alighting-board.*—As a reader of your B.B.J., I will be glad of reply to the following question in your valuable paper:—On going to my hive today I noticed a quantity of pollen on the ground in front of alighting-board, and shall be glad to know reason of this. On examining the combs in hive plenty of young bees were to be seen, also eggs and brood.—Farmer, Wokingham, May 3.

Reply.—No alarm need be felt at dropped pellets of pollen being seen as stated. It only indicates that there has been some crowding at entrance, and that the pollen-pellets have got rubbed off the bees' legs in consequence.

[3286.] *Dead Bees Cast Out in April.*—Would you kindly explain the following? 1. I have a hive, the bees of which seem moderately strong, yet outside the entrance I found the other day about 150 dead bees. There is plenty of food in combs; indeed, I have been feeding them for some time. There are no dead bees lying about outside any of my other eleven hives, so it makes me wonder what can have happened to the stock in question. 2. Can you also tell me the name and address of the secretary of the bee-keepers' association for East Sussex? I enclose name, etc., and sign myself—A. H., Sussex, May 2.

Reply.—It is not very uncommon for a good number of dead bees to be cast out of some hives after the bees have had a long spell indoors owing to cold, and yours is evidently a case of this kind. If queen is all right, no great harm will follow, and the stock will soon pull up again in point of numbers. 2. There is, unfortunately, no B.K.A. for Sussex just now.

[3287.] *Wax Moth in Skep.*—I am enclosing in box sent (along with sample of comb) a maggot from an old skep in which I have lately bought a stock of bees, and ask you to please say:—1. Is it a larva of the genuine wax moth? I found several like it in the skep. 2. The piece of comb sent I also fear is affected with foul brood, and I want your advice to say if I should get rid of the skep and all its contents? I may also say that the hive I wrote you about, and thought was queen-

less, turned out to be all right, as you said it would. And you were also correct in judging that the bees would eventually become less vicious, for they are now not nearly so bad. I receive great benefit from your journals, both of which I read regularly.—W. H. RANSOM, Hellingley, May 2.

REPLY.—The larva sent is that of the true wax moth, *Galleria cereana*. 2. We are glad to say there is nothing wrong with comb sent. The brood is hatching out all right (one young bee crept out while here), and the eggs would no doubt all have hatched safely.

[3288.] *Aborted Queen in Hive.*—I enclose herewith a queen-bee and a piece from each of two combs taken from a hive to-day, and beg to ask:—1. Will you be good enough to tell me the cause of the peculiar condition of the queen? The bees swarmed last year, and, I presume, the queen failed to mate, as there is no brood in the hive and only about 100 bees. 2. Also, is the comb sent affected with foul brood, and is that likely to be cause of failure or mischief? There are several frames of honey in the hive. Reply will greatly oblige—A. H., Swaythling, Southampton.

REPLY.—1. The dead queen sent could never have been of any use, seeing that the poor insect was wingless when hatched, and can never have left the hive. No doubt the ovaries, like the wings, would not be properly developed owing to insufficient warmth while the hatching was in progress. 2. There is no trace of brood—foul or otherwise—in comb sent.

Bee Shows to Come.

A nominal charge of 2s. 6d. is made for notices (not exceeding 7 lines) in this column, 10 lines charged 5s. 6d., up to 15 lines 7s., which covers cost of insertion from order till date of show. Cash should accompany orders for insertion.

July 25 and 26, at Cardiff.—Annual Show of the Glamorgan B.K.A. in connection with that of the Cardiff and County Horticultural Society. Honey, Wax, Appliances, etc. Classes for members, novices. Five open classes, with prizes for sections and extracted honey, 21s., 10s. 6d., 5s., in each class. Bee appliances, 30s., 15s. Entry fee for one or more of the open classes to non-members, 2s. 6d. Schedules from Wm. Richards, Hon. Secretary, The Red House, Gabalfa, Cardiff. **Entries close July 20.**

June 27 to 30, at Derby.—Royal Agricultural Society's Show. Bee and Honey Section under the management of the B.B.K.A. Increased prizes for B.K. Associations as arranged in divisions or groups of counties. Schedules from Edwin H. Young, Secretary, 12, Hanover square, W. **Entries finally close May 29.**

August 8 to 10, at Middlesbrough.—Show of Honey, etc., in connection with the Royal Yorkshire Agricultural Society. Schedules and form of entry from John Maughan, Secretary, Blake street, York. **Entries close June 30.**

August 30, at Montgomery.—Honey Show in connection with Horticultural Exhibition. Two open classes for six 1-lb. sections and six 1 lb. jars extracted honey. Prizes, 10s., 5s., 2s. 6d. Entry fee, 1s. each class. Schedules from Mr. W. J. Jones, Secretary, Montgomery. **Entries close August 23.**

Notices to Correspondents & Inquirers.

*** Bee and Poultry-farming.—A correspondent, dating from Eltham, Kent, writes:—In the B.B.J. of November 17, 1904 (page 452), in reply to Query No. 5688, there is a letter signed "A Worcestershire Small-holder." Could you let me have this gentleman's address or forward to him a letter from me? I very much wish to have a talk with this small-holder, and, as my parents are living in Warwickshire, not very far from Evesham, I should like, the next time I go home, to take the opportunity of calling upon your correspondent, if he had no objection. It is just possible that I may be down in that neighbourhood at Whitsuntide, but, if not, then I should be there some time during the summer. Thanking you in anticipation for the introduction desired.

[We do not keep "used copy" longer than twelve months, and cannot, therefore, furnish the address asked for. Should this chance to meet the eye of the "Small-holder" referred to, and he will meet the views of our correspondent, we will gladly put the parties in touch.—EDS.]

E. BLICK (Somerset).—Sugar for Bee-food. The sugar known as Tates No. 1 is not, we believe, sold as entirely pure cane sugar; but we should not wholly condemn it as unfit for bee-food.

A. H. (Falkirk).—Bee Nomenclature.—Bees were smashed flat in post when received, but so far as could be judged they are the common brown or native bee.

T. S. (Carlisle).—The bee sent is *Andrena albicans*, a common wild bee at this time of the year.

Suspected Combs.

W. T. (S. Wales).—No disease in comb sent. The few sealed cells in sample contain only "chilled brood."

BONUS (Newark).—No. 1 sample shows foul brood in very pronounced form. In No. 2 there are slight signs of the disease in two or three cells, but in remainder the brood is "chilled" only.

G. N. T. (Sussex).—Comb sent is affected with foul brood of very old standing. In fact, the brood in sealed cells has all dried up and disappeared. It seems clear that the bees were diseased last year and have gradually dwindled away since until all were gone.

L. C. P. (Norwich).—There was only one cell in sample where any trace of brood could be found, but this one showed that the disease was there.

*** *Some Letters, Queries and Replies, &c., are unavoidably held over till next week.*

Special Prepaid Advertisements.

Twelve words and under Sixpence: for every additional Three words or under, One Penny.

Advertisements for current Issue must be received by first post on Tuesday.

7S 6d. HIVES, 7s. 6d.—The Beekeeper's opportunity, standard size, with super complete, painted. Illustration sent.—OZONE APIARY, Trimingham, Norfolk. P 45

SEVERAL STRONG STOCKS BEES, on seven frames, healthy, in travelling box, F.O.R., 16s. each. Eggs for sitting, from pure bred Buff Orpingtons, 2s. per dozen; returned infertiles replaced.—TREBBLE, Romansleigh, South Molton. P 44

HEALTHY NATURAL SWARMS, 5lb. to 6lb., 2s. 6d. per lb. Cash.—RICHARD DUTTON, Terling, Witham, Essex. P 43

SWARMS of "YE OLD ENGLISHE BEES."—Having so many orders already booked I cannot promise others till after June 15. Prices 10s. 6d., 12s. 6d., and 15s. Packing boxes free and safe delivery.—W. WOODLEY, Beedon, Newbury.

I AM OFFERING SWARMS this season, in boxes, 10s. each. On ten frames, wired and fitted with half sheets of British weed foundation, 15s. each. All my bees are sent strictly on approval. Safe arrival guaranteed. No risk to purchaser. Cash with order. Boxes returnable.—E. THOMPSON, Model Apiary, Gowdall, Snaith, Yorkshire. Printed instructions sent, as to transferring to frame hive. P 42

4 STRONG HEALTHY STOCKS, in well-made hives, 25s. each.—A. COOK, "Torwood," Ford Bridge Road, Ashford, Middlesex. P 41

CHEAP.—EIGHT NEW HIVES. Must be sold, owing to removal. Stamp please for particulars.—PRITCHARD, Wainalong Road, Salisbury. P 40

BEES FOR SALE.—Four strong Stocks, in well-made modern hives, each on ten frames, with two supers (drawn-out combs), and lift. Price 30s. each, or £5 10s. the lot. — RANGER, 39, Beulah Road, Tunbridge Wells. P 39

SPARE RELIABLE 1905 QUEEN, 4s.—A. BUTLER, Westville, Scotter, Lincoln. P 37

FOR SALE, TWO strong healthy SKEPS, 12s. each. Champion Honey Plants, 8d. a dozen.—DARLINGTON, Charing, Kent. P 38

MUST SELL.—What offers for the following goods?—1 Hive, double walled, two sides; 11 Honey Tins, holding 15 to 25 lbs. each; 3 Queen Excluders; 1 new Skep; 12 new Quilts; 1 Wells' Super Clearer; ten frame ditto; 6 Standard Frames; Sprayer; 12 Dividers; Observatory Hive, three-frame; 13 Shallow Brood Combs; 72 Shallow Combs; Drone, perfect; 15 Shallow Frames, wired; all healthy; 85 Copies of "B.B.J."; excellent Microscope, £2 15s.—ALFRED HALL, Many Pitts, Marton, Blackpool. P 36

30TH YEAR.—Reliable Queens, 1905, in introducing cage, 5s., delivered.—ALSFORD, Expert, Haydon, Sherborne. P 35

SECTION HONEY WANTED, pale colour, free from granulation.—T. SMITH AND CO., 17, Cambridge Road, Harborne, Birm. R 32

QUEEN REARING.—No trouble to work; no expensive appliances; can't fail; four cages and full instructions, 2s 6d. — MEADOWS, Syston, Leicester. P 33

STRONG STOCK OF BEES, in ten frame Hive (also accessories). What offers? HARE, Lonsdale Road, Harborne, Birmingham. P 32

WANTED, good GEARED EXTRACTOR, Cowan preferred, for cash CORLETT, Hutchinson Square, Douglas. P 31

NATURAL SWARMS NOW BOOKED.—May, 3s.; early June, 2s. 6d; later, 2s. lb; returnable box.—PRESBYTERY APIARY, Marnhull, Dorset. P 30

LIGHT HONEY, screw-cap jars, 8s. dozen; bulk, 53s. cwt. Sample 2d.—CHARTER, Tattingstone, Ipswich. P 29

SPECIAL OFFER.—12 Chrysanthemums, from fifty varieties, outdoor, 2s. dozen, post free; Calceolarias, 9d. dozen, post free.—JOHN HETHERINGTON, Dairy, Low Row, Carlisle. Lists free. P 28

PRIME NATURAL SWARMS, expected end of May and early in June (no artificial swarms made in this apiary). I guarantee them natural, healthy, and also safe arrival. May, 3s.; June, till 15th, 2s. 9d.; after 15th, 2s. 6d. per lb.; 1s. allowed on all empty boxes returned carriage paid.—S. BAILEY, Itchingfield, near Horsham.

FOR SALE, cheap, IRON CIRCULAR SAW BENCH, just the thing for hive making, etc.—Address "A.," "Bee Journal" Office. P 26

SALE OR EXCHANGE, Fowls for Bees, Cook-Tammadge best laying strains, White Wyandotes, 1905 hatched, 4s. 6d. each.—SHACKLETON, Thorner, Leeds. P 25

HEALTHY SWARMS BOOKED NOW, 2s. 6d. lb.; May, 2s. lb.; June Queens, 3s. 6d.—HEMMING BROS., Standlake, Witney. P 24

ORDERS BOOKED NOW for NATURAL SWARMS of my hardy prolific strain, guaranteed healthy and safe arrival, 4 lbs., 12s. 6d.; 5 lbs., 15s.; 6 lbs., 18s. Packages to be returned. Expected early in June.—WHITING, Valley Apiaries, Hundon, Clare, Suffolk. P 23

WANTED, SWARMS or STOCKS, in exchange for Art Mail Cart. Sell 40s.; cost 85s.—WILLIAMS, Cefncoed, Ponthir, Mon. P 22

NATURAL SWARMS, guaranteed healthy, 1905 Queens, 12s. 6d., carriage paid. — ARNOLD, Obelisk Road, Woolston, Hants. P 21

WANTED, HOUSE, with land, suitable for poultry and beekeeping, about twenty or thirty miles from London; low rental.—EASTO, 48, Comerford Road, Brockley, S.E. P 22

TWO SPLENDID HIVES.—Taylor's non-swarming and combination, almost new, healthy, and painted, cheap; or exchange early swarms.—PARK, Dempster Street, Greenock. P 19

12 STANDARD SHALLOW FRAME CRATES, with eight clean extracted combs, guaranteed healthy, 6s. 6d. each.—HARRIS, Wavendon, Bletchley, Bucks. P 17

ENGLISH and ITALIAN BEES FOR SALE; Standard Hives.—THOS. HILL, Scotlands, Cannock Road, near Wolverhampton. P 16

PROMISING prize bred 1906 DRAGOON PIGEONS, Blues, 4s. 6d.; specially good Chequers, 7s. 6d. pair; splendid 1905 Grizzle Cock, 10s.; Chequer Hen, lovely type, 7s. 6d.; or 12s. 6d. the pair; cost 25s. Part payment, weed super foundation.—"POSTMASTER," Romford. P 15

NATURAL SWARMS IN JUNE, from strong healthy Stocks, in Bar Frame Hives, 10s. 6d. and 12s. 6d. Cash with order, or deposit.—BROWN, 30, Albany Road, Crawley, Sussex. P 14

FOR SALE, RACK, containing 21 sections, with starters, 3s. 6d. Also 100 Sections, 2s.; slightly soiled, or would exchange for Shallow Combs.—WILSON, Livermere, Suffolk. P 13

WANTED, TWO STOCKS BEES; exchange silver English lever watch.—J. COMLEY, 246, Cricklade Road, Gorse Hill, Swindon. P 12

STRONG HEALTHY SWARMS, 1905 Queen, 12s. 6d., 13s. 6d. Stocks on eight Standard Frames, 23s. 6d., with 1905 Queen. Guaranteed healthy.—W. WOODS, Normandy, Guildford. P 46

LIGHT COLOURED ENGLISH CLOVER HONEY, in 1lb. screw cap jars. Sample 2d. — F. W. FRUSHER, Crowland, Lincolnshire. P 10

FOR SALE, new WELLS' HIVES, complete, 21s.; Guinea Hives, complete, 12s. 6d.; Nucleus Hives, 3s. 6d.; all well painted.—THE APIARY, Woodmancote, Cirencester. o 99

Editorial, Notices, &c.

THE ROYAL SHOW AT DERBY.

DATE FOR CLOSING ENTRIES.

We are now able to say that entries for the above show will be received up to Tuesday, May 29, at ordinary fees, the Council of the R.A.S.E. having acceded to the request of the B.B.K.A. for this concession because of the late adverse weather. Provision will also be made for the return of entry fees in cases where weather drawbacks prevent honey of the current year being staged. We trust that this arrangement will induce bee-keepers to apply at once for schedules, seeing that any fees now paid will be returnable according to the conditions above stated.

HONEY IMPORTS.

The value of honey imported into the United Kingdom during the month of April, 1906, was £2,965.—From a return furnished to the BRITISH BEE JOURNAL by the Statistical Office, H.M. Customs.

SURREY BEE-KEEPERS' ASSOCIATION

ANNUAL MEETING.

The annual meeting of the above association was held at the County Hall, Kingston-on-Thames, on April 29. Mr. W. Welch, C.A. (president of the association) in the chair. Among those present were Messrs. A. Seth-Smith, E. Bontoft, A. E. C. Mumford, W. Harding, W. Alfred Dawson, A. Watkin, G. Butler, C. T. Overton, T. Gibbons, W. Bourne, W. E. Hamlin, B. Bisset, F. A. White, M. A. Dean, F. J. Bernau, B. Drew, and F. B. White (hon. sec. and treas.).

The annual report for 1905 contained sympathetic allusion to the deaths of Mr. E. J. Halsey and Mr. H. E. Gurney, vice-presidents of the association. The work of the past year showed a continued steady progress and advancement in all branches of the bee-keeping industry in Surrey. The grant of £150 by the County Council was to be renewed for the present year, and, as a result, there would be the usual course of lectures and demonstrations, expert visits, and advice to bee-keepers, and the publication of the monthly journal. The attendances at lectures and demonstrations were excellent, and the demand for them at flower shows increased each year.

The chairman, in moving the adoption of the report and balance-sheet, said the association seemed to be growing yearly. They had 132 new members, making a total of 663, an advance of 20 on last year's roll. The number of visits by experts was 23 more, and the total stocks examined had increased by about 200 in 1905. The mortality list, he was sorry to say, was heavy, but with a large accession of new members, they must always expect an increase, and especially with the great watchfulness of their experts. Last year 138 stocks were found dead, the number in the previous year being 106. On the whole, he thought, the committee were satisfied that good work was being done, tending not only to minimise, but to eradicate foul brood in the county. With regard to their finances, last year they had a balance in hand of £15 14s. 9d., while it now amounted to £40 5s. 10d.

The motion was carried unanimously.

Mr. Seth-Smith proposed a hearty vote of thanks to the County Council for the renewal of their grant, without which it would be impossible to carry on the good work. He was told whenever this vote came before the Education Committee, instead of trying to cut it down, or cavilling at it, they granted it at once.

Mr. Dawson seconded the motion, which was carried.

The chairman, in acknowledging the vote, said that though not a member of the higher committee, he knew that the committee gladly voted this money, because they were sure it was well spent and did a deal of good in the county.

The following gentlemen were elected as the executive council for the ensuing year: — Messrs. Archibald Seth-Smith, F. J. Bernau, G. B. Bisset, W. A. Dawson, F. S. Fletcher, G. C. Halahan, W. E. Hamlin, John Kaehler, Joseph King, J. W. Lewis, A. H. Miller, W. F. Reid, W. Sole, E. Walker, A. Watkin, T. H. E. Watts-Silvester, M.A., M.R.C.S., and F. B. White.

Mr. Bernau moved a vote of thanks to the hon. secretary (Mr. F. B. White). He did not think the association would be in the position it was but for their hon. secretary, who took a real interest in the work he did for them.

Mr. Watkin, in seconding the motion, said he had derived great advantage from Mr. White's kindness, while his readiness to assist individual members was beyond all praise.

The chairman said the proposition had given him great pleasure to submit to the meeting, because he knew from experience the excellent work their secretary had done.

The motion was carried unanimously.

Mr. White heartily thanked the meeting, and said he could not help feeling very proud of the position occupied by the association, which he helped to start in the first instance. He had taken the best

steps he could to promote its welfare, but he reminded them of the excellent work done by Mr. Seth-Smith, who had been their chairman ever since the institution was started. But for his kindness he would have been unable to carry out the work as it had been done.

A vote of thanks to Mr. Seth-Smith and a similar compliment to the chairman, brought the meeting to a close.

Votes of thanks were also passed to the retiring executive council, and to the experts for their services.

Correspondence.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

**** In order to facilitate reference, Correspondents, when speaking of any letter or query previously inserted, will oblige by mentioning the number of the letter as well as the page on which it appears.*

AMONG THE BEES.

[6299.] *Willow Honey.*—In the very interesting notes by "Nemo," in reviewing foreign journals, it reads almost as if M. Van Hay's article shows that willow honey was some new discovery. It may be interesting to make two extracts from B.B.J., Vol. 24, page 147:—"On Sunday, Monday, and Tuesday, March 22-24, 1896, we had a very high temperature, with nothing but willow in bloom, and a remarkable honey-glut occurred. There was as rapid an incoming as I have ever known during the height of the season." This is signed "S. Simmins." On page 167, Mr. Henry Neve, also of Heathfield in confirming above, adds:—"I have again got my hives almost filled with this beautiful honey. I think this is the fifth season we have come in for a good willow harvest." A bountiful flow from the willow is therefore not unknown, but I think it requires very considerable heat and a bright sun to compel the flowers to yield appreciable quantities at least of surplus honey.

Clubbing Bee Papers.—This is extensively done in some countries, and I think the idea is a good one. If all second and further papers were got at a reduction it might induce many readers to invest in more than one bee-paper. Before, he was content with one. The offer induces him to take three, let us say, and he is a distinct gainer. The seller has a smaller profit undoubtedly but it is a profit which, but for the special offer, would not go into his coffers—and "every little makes a mickle," as our Scotch proverb has it. Whether the game is worth the candle in this country I do not know.

But I would point to another form of clubbing, which might be more common. Where a few bee-keepers live near each other, some will no doubt take the BRITISH BEE JOURNAL, others the *Bee-keepers' Record*, and a few both. In addition, however, some six of those better able to afford it might take each a copy of the best American papers, all of which by interchange might become the common stock of all. After perusal each would return to the true owner. Or the extra papers might be got as the common property of all bee-keepers in the village, bound in volumes at the end of the year, and handed over to the public library to become a little mine for future entrants to dig in during their novitiate stage. I would have more hopes of the success of these small coteries making good use of these volumes than I would have of those kept in large centres connected with county associations. These latter, being so distant generally, are very seldom patronised by any but those bee-keepers living in close proximity, and, if in large towns, very seldom even by these. The wealthier class of readers who practise the pursuit as a mere pastime might hand over their copies of JOURNAL and *Record* at the end of the year to such village libraries as would make them easily available as works of reference to all bee-keepers.

Local Shows.—Wherever an opportunity occurs at any village or town flower show a honey department should form a part of the exhibition. Nothing better can be done to educate the taste, and produce that neatness and cleanliness which in this dainty sweet adds such a charm to its production and use, than laying choicest selected specimens side by side on the show-bench. It helps the sale wonderfully, and at the same time adds a new zest to the pursuit, as the prize-taker strives to keep up his good name, and the loser to attain still nearer to perfection. In general, the mistake made by most local show committees is to ask too much. Small exhibits are best, as more can join in the competitions, and better specimens can be shown. A crate should never be demanded, the placing of such a receptacle on the show-bench serving no good purpose. Three, six, or at most only twelve, sections or glass jars should be called for, which should all be of uniform size, and the best is the common screw-cap holding 1 lb. of honey. It is scarcely treating a judge fairly to set him to award prizes in a class where the jars are of all shapes and sizes. The cheapness at which they can be purchased makes it no hardship to insist on uniformity. Sections, too, should be as uniformly arranged as possible,

and should be glazed. They also look better with a neat, taking, narrow lace border. At most shows this is now being insisted on, and the custom will soon become universal. Shallow frames should be placed in a suitable case, easily handled, and showing off the face of the comb to the best advantage. Perhaps one to three of these would make the best appearance. Everything about frames, sections, and jars should be scrupulously neat and clean. No sticky honey should be seen or felt, no propolis should obtrude its adhesive properties when the judge is handling exhibits, and no thumb-marks should be seen. At times, stewards and not exhibitors may be responsible for these. It should be a golden rule about surplus honey: — "Handle not with unwashed hands."

American Candy. — Take good thick clover honey and heat (not boil) it until it becomes thin; then stir in fine granulated sugar. After stirring in all the sugar the honey will absorb, take it out of the utensil in which it has been mixed and knead it thoroughly with the hands. The kneading makes it more pliable and soft, so that it absorbs or takes up more sugar. The kneading operation, with the adding of fine sugar, should be continued till the dough is so stiff as to be quite hard to work. It should then be allowed to stand a day or two, and if at the end of that time it is so soft as to run or be sticky a little more sugar should be kneaded in. It should then be cut into cakes of convenient size and placed on the tops of frames in such a way that the bees can get at it easily. That known as "Good" candy for mailing queens is made in a way somewhat similar to above:—Take honey and fine icing sugar, and stir until it becomes a consistent dry paste. Add sugar until it turns to the proper consistency.—D. M. M., Banff.

NOTES FROM A BEE-KEEPER IN ROME.

[6300.] Is the fountain pen a blessing or the reverse? Without one, these lines would not have been written, and your space would have been spared for more important matters. After a long ramble, I am sitting on a block of marble in a corner of the Forum. It was probably brought from Greece by one of the Cæsars, for it has the fine grain of Paros, not the sugar-like structure of the beautiful Carrara stone. Close beside me is a lizard, about 9in. long, with a beautiful bright green back and a tail rather longer than his body, reminding one of his far-away ancestor, the diplodocus. He has one eye on me and the other on a bee of pure Italian race that is foraging among the flowers of the pellitory-of-the-wall that grows luxuriantly among the ruins. The flower reminds one of the English legend that it was introduced by foreign monks, and it is certainly chiefly found on old monastic buildings. It grows as luxuriantly on the walls in Rome as it does on Fountains Abbey in Yorkshire, or Newark Abbey in Surrey. A sudden flash interrupts my musings. Quicker than my eye could follow the bee had disappeared, and the lizard was moving his jaws in a self-satisfied sort of way. Quick work this, much quicker than that of his big cousin, the alligator, who I have watched dragging his prey beneath the muddy waters of the far-off Parana, until the last bubble appearing on the surface showed that another mammal had succumbed to his cold-blooded progenitor. But a slight movement on my part resulted in another flash, and the lizard was gone. However, I saw his tail disappear beneath a smaller piece of marble, and removed this in order to find him. Needless to say, there was no trace of him; but, instead, I found a collection that would have gladdened the heart of a naturalist. There were millipedes and wood-lice quite twice the size of our own, and thousands of ants, small in size and red in colour, and among them a number of soldier ants with enormous heads and forceps larger than the rest of their bodies. These soldier ants are a fraud; they do not attempt to fight or defend their home, but run away into the hole more quickly than the workers. It is very different with the terrible sãba ant of Brazil, which will make short work of any living being that cannot escape, and will make a clean skeleton of a fowl in less than a quarter of an hour. But the most interesting thing under that block of marble was a family of scorpions. At least, I assume they were a family; at any rate, there were one large and two little ones. Some of your readers may remember a little mishap that occurred to me with a scorpion not long ago on the banks of the Mississippi. I was therefore careful, and, before touching them, constructed a tube with a newspaper. Into this, by persuasion and otherwise, I induced them to enter, and, on further search, I found quite a number of these interesting little crustacea.

On returning to my hotel, I placed them in match-boxes, and, unfortunately, counted them. It is not always well to be too accurate and it would have been well had I omitted the enumeration. Italian porters are not such gentle beings as their English colleagues, and somehow or the other some match-boxes were broken. The partner of my joys and sorrows does not care for bees, and deprives herself of much useful instruction by not reading

the B.B.J. She will, therefore, not learn through your columns why I shook all my clothes so carefully over a bath on my return home; but my memory still dwells more fondly on these two missing scorpions than on the others that are now in safe receptacles. As a matter of fact, these little creatures soon become tame and cease to threaten with their caudal appendage. Hunger, the universal tamer, will even induce them to accept flies and ants from your hand. But to return to the Forum. Close by was an old Roman well, lined with beautiful maidenhair fern, and by the side of the water was apparently a tortoise. His head projected, and I could see his eyes moving, so I procured a stick and tried to raise him. But there was a sudden splash, and what had appeared to be a living tortoise proved to be the shell of one with a frog sitting inside it. However, tortoises are pretty common in the neighbourhood, and the children tie strings to them and make them drag weights., Wandering over into the Coliseum, I found on its walls a female moth of the gigantic ailanthus silkworm of Japan. The ailanthus tree grows well in the public gardens of Rome, and the moth has become acclimatised. On the old ruins and in the inscriptions upon them are frequently to be found the clay tubes of a species of wasp, which seems to prey upon caterpillars. A jet-black humble-bee, longer in shape than our own, hums loudly among the red and white clover, and there is, at least, one species of carpenter bee. One of these found the cardboard tube of a rocket and thought it an ideal piece of wood for his boring operations. When he got through he seemed quite surprised to find it hollow and wandered through it, and the hole he had made, several times before he flew away disappointed. Under the rocket tube lived a pair of jet-black earwigs of enormous size, and forceps that were really useful weapons. Perhaps, if my fountain pen does not run dry and you can spare the space, I may send you some lines on bee-products and appliances at Milan.—WALTER T. REID (Addlestone).

SCOTCH HEATHER HONEY

AT LESS THAN 3D. PER LB.

[6301.] In your issue of May 3 (page 171), Messrs. Ingram Bros. and Co., 34, Robertson Street, Glasgow, through their solicitor, tell us that they have decided "not to indulge in correspondence through the Press" on this matter, and that they are "prepared" for contingencies. They, at the same time, and inconsistently, do not omit to "indulge in correspondence" so far as presuming to define the limits of "the question." But I happen to understand the "question" better than they do, according to their "prepared" letter of April 30; and, if they were in Germany, the firm would find the "question" to be more than "one entirely between buyers and sellers." In the event of the authorities proving misrepresentation against them in relation to their offer of Scotch heather honey (in barrelfuls at less than 3d. per lb.), they would be compelled either to uphold their profession or suffer the prescribed penalty. In our country they are not absolutely compelled to do either, and so I do not know whether their honey is of the genuine Scotch heather kind or not.

They, however, "indulge" us so far as to say in one sentence that their Scotch heather honey *is* absolutely pure, but *was* faulty, and that they "*succeeded* in putting it right." Perhaps their Mr. Ross will be "prepared" to further "indulge" me by expatiating somewhat more clearly on the meaning of the three words italicised.

The meaning of their immediately preceding sentence is also considerably involved; but I have been trained to distinguish between the head and tail of similarly ill-constructed letters of the kind, and I gather from the one now under consideration that Messrs. Shaw Bros. have not as yet had to withdraw or apologise for their statements regarding Messrs. Ingram Bros and Co.'s absolutely pure, faulty, Scotch heather honey in barrelfuls at treacle-cutting prices.

Messrs. Ingram Bros. and Co. and their solicitor — particularly their *solicitor* — should never "demur to a comparison"; for comparisons are *instructive*, and our Robertson Street and Bath Street friends must believe that I know what I am writing about in here telling them that they sadly need instruction relating to the prices readily to be obtained for Scotch heather honey, whether in "glass packages" or in "bulk in barrels." And, by way of comparison, I may add that a bulky barrelful of the past season's Scotch heather honey would have been worth more than a barrelful of good Scotch whisky.

Although honey-production is with me mainly a hobby, I have never at any time retailed it at less than 1s. 3d. per lb. During the past season I have produced "barrelfuls" of Scotch honey, and sold it, bottled, at 1s. 6d. per lb. retail, and 1s. *per lb. wholesale* — and, mark you, not heather honey, but clover honey.

Messrs. Ingram Bros. and Co. are either philauthropists or inferior judges of what can be done in the Scotch heather honey trade in the way of prices. They should gracefully "apologise and withdraw." I send name for reference and sign—D. M., Glasgow and Girvan.

("*Correspondence*" *continued on page* 196.)

HOMES OF THE HONEY BEE.

THE APIARIES OF OUR READERS.

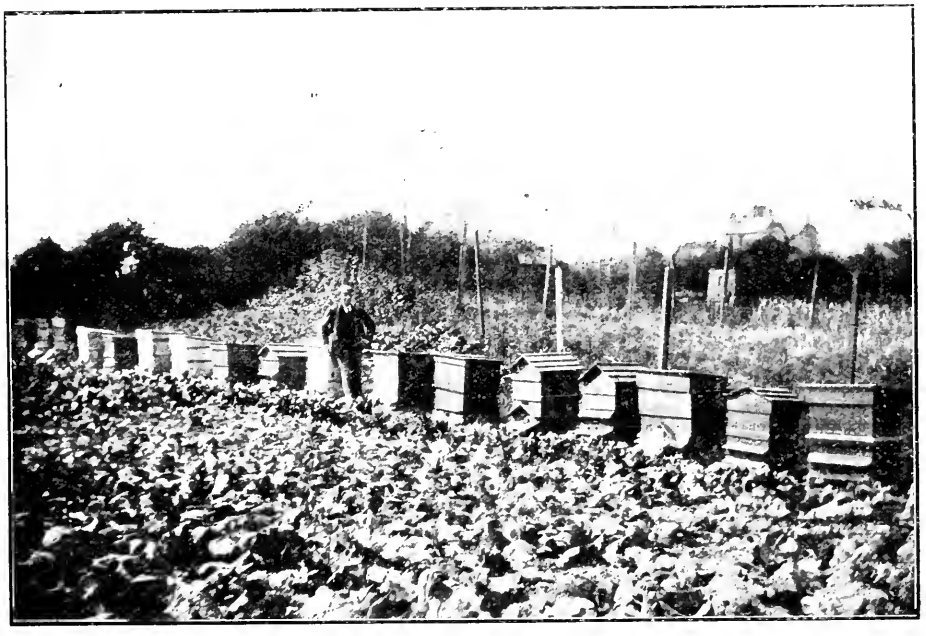
We are glad to see in Mr. Lloyd's business-like apiary, shown below, what can be done by a working man who makes his own hives at a minimum of cost. They look well, and will no doubt work well. For the rest his "bee-notes" speak for themselves. He says:—

"I will endeavour to comply with your request by sending a few 'notes' to accompany the photograph of my apiary.

"My first experience among bees dates as far back as 1867, and at that time the whole of the bees in most apiaries were sacrificed in order to obtain the honey. Nor did I become enlightened in the better way of managing bees till 1895, when I came in contact with a few enthusiastic bee-keepers in the East Riding of Yorkshire. I afterwards removed to the grand old town of Lancaster, where I started a new apiary. Unfortunately, the field where my hives were situated has since been turned into a number of poultry runs, but I hope to have them more favourably situated by next year. I had some time before commenced taking in your excellent BEE JOURNAL and *Record*, and with the valuable help extracted from their pages, I have been able (with increasing pride and interest) to bring it to its present condition. I should like to say, in passing, that if every reader of your journals would hand them on to a friend, after having read them, it would greatly help to spread the knowledge of bee-culture and create (in some cases) interest where hitherto no serious thought had been given to the matter. It would also help to make bee-keeping one of the most interesting and instructive hobbies that could be taken up by any man who has a little leisure time on his hands.

"There is nothing special that I can say about my own bee-keeping, except that I have made all my own hives from used "Morrell" bacon boxes, purchased for 9d. each at the grocers. They may not be very artistic in appearance, but they are sound and weather-proof, and being only a labouring man it not only suits my pocket, but has enabled me to extend my apiary more than I otherwise would have been able to.

"I work chiefly for extracted honey, and have a ready sale for all I get at 1s. per 1-lb. jar. My wife jars the honey off, and does it very well. The only difficulty I have is extracting the money from the good wife's pocket when once it has got there. Seriously, though, and to come to our bee-keepers' associations, if local secretaries were more energetic in trying to get members for the county associations instead of leaving this part of the work to the bee expert, I think it would be the means of enlarging our membership. Also, if landlords would give more encourage-



MR. W. LLOYD'S APIARY, BANK ROAD, LANCASTER.

ment to agricultural labourers with regard to bee-keeping, I feel sure it would tend to keep the rising generation in the country instead of passing away to be absorbed in the big towns.

"Bee-keeping is a fascinating, as well as a profitable, pursuit, and the extension of its knowledge would help to a certain extent to lessen the cry we so often hear from the public of 'Back to the Land.'

"Wishing all bee-keepers a successful honey season this year."

CORRESPONDENCE.

(*Continued from page* 194)

RISKS IN BUYING STOCKS OF BEES.

[6302.] Referring to Messrs. Jas. Lee and Son's warning note (6297, page 183) on the risk of buying stocks of bees, may I be allowed to mention that I have to-day examined and destroyed a stock found to be suffering from foul brood, notwithstanding the fact that in vendor's letter the bees are "guaranteed healthy." The purchaser—who is a beginner in apiculture — was quite unaware of the presence of disease in the hive until it was pointed out to him. This is the only case of foul brood I have come across in the district this year, so far, and it shows how a visit from the county expert (along with prompt action) has saved further loss to the owner of five stocks, while preventing the spread of disease in the neighbourhood.—J. GRAY, Travelling Expert for the County of Lancashire, May 11.

[It may be well to point out that Messrs Lee and Son's complaint on page 183 referred to stocks of bees being described in advertisements as healthy, without giving a "written guarantee" of their condition when sold. In cases like that mentioned above, however, buyers have a legal remedy against sellers in the guarantee given, if they choose to enforce it.—EDS.]

WINTERING BEES WITH SUPERS ON.

[6303.] I most readily comply with the request of your correspondent (6294, page 182), and append a few extra notes on the method of wintering bees with rack of shallow-frames over body-box. I have fully digested the "Guide Book" contents, and also do the same with my B.B.J. every week. Not only so, but I make a note of any little item which I think is valuable. The "Guide Book" says that excluder zinc should not be left on all winter. So after extracting, I put back on a very strong stock a rack of shallow-frames and removed the queen excluder. The bees were left thus fixed up from September till February 20, when I see by my "notebook" (a very valuable asset to any bee-keeper) that they were "strong, with three frames of brood, and bees covering seven frames." To-day they fully crowd ten frames from bottom to top, and I am expecting a swarm from them daily. I have every confidence in the plan, and shall try it again. The advantages are good ventilation, free and easy winter-passage, and plenty of air. I, too, have to thank my teachers in the B.B.J.

Then, with regard to your correspondent (6296, page 183), and the use of salt. I beg to say I do not know of any good authority who directly lays it down as a necessity. But I had it given me by a bee-keeper of the old school as being a good thing. The bees certainly like salt, as it is recommended to put salt in the drinking water. So I tried this, and, like the shallow-frames above the body-box, found it a good thing, hence my passing it on. I use about an ounce of common salt on each floor board, well rubbing it over with the palm of my hand. I have used it three or four seasons, and have never had any but good results from hives so treated. Perhaps our Editors will give their opinion?—R. L., Castle Cary, May 14.

[Used as above, salt cannot do harm, but will probably be beneficial.—EDS.]

THE SPRING OUTLOOK.

[6304.] In addition to my autumn report, which I generally send, I thought you might like a brief line respecting the spring outlook in this part of Surrey.

Since the middle of April each colony has been given about one-third of a pound of medicated syrup daily. The result is that my sixteen stocks are in a first-rate condition and ready for supers, as I noticed several queen-cells started while transferring them into clean hives. The expert paid me his usual visit on May 9 and found them all strong in bees and an abundance of stores. I have, therefore, ceased feeding.

One reason, however, why I pen these lines is to let you know that one hive contains two laying queens quietly at work. Mr. Earl (expert of the S.B.K.A.) destroyed one, and advised me to place a drawn-out comb in the centre of brood-nest, which I did, and three days later it was half filled with eggs.—G. F. S., Dorking, May 1.

Queries and Replies.

[3289.] *Cause of Bees Dwindling.*—I am sending one of Mr. Sladen's Golden Prolific queens. Last summer she was indeed prolific. I never saw such combs of brood—not a cell empty—and there being

no excluder above brood-chamber she went up and filled the six centre sections with drone-brood besides; but, although the hive was full to overflowing with bees, they stored very little honey. I left all the honey in the brood-box, and packed the bees down for winter with a 2-lb. cake of soft candy, still they have dwindled. I have been feeding the stock with syrup for three weeks, but, notwithstanding this, the queen has laid very few eggs, there being only two combs with small patches of brood; therefore, as I had a very large swarm of black bees from one of my hives to-day, I have taken away the Golden queen, and united the swarm to the remaining bees in the hive in question. I secured both lots and they are quite peaceable. Please examine the queen, and let me know what you think. She is only two years old.—J. G. C., Shepton Mallet, May 9.

REPLY.—In view of the difficulty of judging without some knowledge of the past history of the queen in question, we forwarded the dead queen and bees, along with the letter of our correspondent, to Mr. Sladen, who kindly favours with the following reply:—

"The dead queen sent is not a pure example of my Golden Prolific strain, being much darker in colour. A colony of my Golden Prolific strain of bees was sent to your correspondent on May 17, 1904. This contained a 1903-reared queen of my Golden Prolific strain. If the dead queen sent was from this colony, she is probably a granddaughter of the original queen I sent, and, therefore, a good deal crossed with the local bees, the workers produced by her being still more so. I have no other record of a Golden Prolific queen sent to the same customer. As there is some doubt about the age and identity of the queen, I should like to have further particulars from "J. G. C." At first, I thought the queen looked young enough to be a virgin of this year, but I see she has been fertilised. As regards the matter of breeding enormously at the expense of honey-production, this is, as you know, the drawback of the pure foreign races in this country, and it will sometimes crop up in examples of my strain, and in cross-breds between it and the English bee, my strain having originated from a cross between the Italian and English bee. The queen sent by me to your correspondent in the spring of 1904 was probably not distantly related to imported stock. But by my new method of breeding by selection of *colour*, my strain is developing an individuality of its own, and, as I always breed from queens whose progeny are very good honey-gatherers indeed, and I have not allowed any foreign blood to mix with my strain for several years, I am, therefore, hoping to breed out this undesirable tendency.

"The dwindling and breeding on two combs only this spring, after great prolificness last year, is, in my opinion, due to quite another cause. Without having seen the colony I should say that the most probable explanation of this, from the letter of your correspondent and queen, is that the latter was reared last year towards the end of the season, and by accident became a drone-breeder, or a very poor breeder. She has not at all the appearance of a worn-out queen, but is evidently a young one. Of all the queens I reared last year, there were only two drone-breeders, both of which, on examination, were found to have been fertilised, so that a fertilised queen may produce drones only. —F. W. L. S.

[3290.] *Glass Covers for Frames.*—I am thinking of trying how a sheet of glass would do on the top of the frames instead of the linen quilt, leaving a space of $\frac{3}{8}$in. between it and the top of the frames. The chief advantage of this would be that one could see how the bees were progressing on the frames below, without disturbing them and cooling their internal warmth by removing the covering. To accommodate the feeding of the bees, I should divide my glass into three parts, across the frames —the two outer parts with fixed glass panes, the middle one, with three movable glasses when there was no feeding. But when feeding was necessary, one or all of these glasses might be removed, and candy, in boxes or feeding dishes, inserted. One is always anxious to know how the busy little workers are, but to acquire that knowledge, with the present linen quilt, they have to be considerably disturbed. Do you think this idea worth the trying? Name sent for reference.—J. B. C., Loughborough, May 12.

REPLY. — Glass covers for frames were warmly advocated in our pages over ten years ago by a well-known and successful bee-keeper, happily still with us. Others have also since adopted such coverings with success, one correspondent mentioning how a circular hole may be cut in the glass for feeding purposes. A full description of the covers by the first-named bee-keeper appears in B.B.J., Vol. 24.

[3291.] *Dealing with Foul Brood.* — I enclose herewith sample of comb for inspection, but have no doubt in my own mind that it is foul brood. I will, however, be glad of your opinion on the following points:—As it is a pretty strong stock, I should like to save the bees, if possible, and having shaken them off the frames into a clean hive with clean combs, I am feeding with medicated syrup, as per "Guide Book." In view of this I

ask:—1. Do you think there is a good chance of the bees ridding themselves of disease? 2. Can the combs—from which the bees were removed—that had no brood in them be used again? 3. Can honey from the diseased hive be utilised, and, if so, how? 4. Can I put supers on this year if there is no recurrence of disease? 5. Is it in a contagious stage on comb sent? 6. What is the cause of bees becoming affected, seeing that they have been fed on candy in the winter with proper proportions of naphthol beta and have had naphthaline in corners of hive? I should have said before that the piece of comb sent is the worst of any in the hive. There is another comb nearly as bad, but the rest seem to be fairly good, and young bees were hatching out while I was shifting them. They are very busy, and have gathered a good lot of honey already. I saw a sealed queen-cell on one comb. In conclusion, I am afraid that the piece sent is rather larger than you wish, but I wanted you to see the different stages of the brood or larvæ. Thanking you for the assistance derived from a faithful perusal of B.B.J., I sign myself—Anxious, Tottenham, May 12.

Reply.—1. The chance of effecting a cure would have been increased had the bees been dealt with on the starvation plan, as directed on page 152 of "Guide Book." By this method the bees are shaken from the combs and run into an old skep, then, after forty-eight hours' confinement in the latter, they are transferred to a clean hive, fitted with full sheets of foundation, and fed with medicated syrup. 2. No; all combs containing dead larvæ should be burnt. The broodless ones, if not too old and black, may be melted down for wax. Honey from foulbroody hives may be used for household purposes, but on no account as bee-food. 4. If no signs of the disease appear, and bees increase in numbers, supers may be given if the honey-flow for the year continues plentiful. 5. Yes; foul brood is always more or less contagious. 6. The probability is that the honey from a diseased stock has been carried into the hive, and given to the larvæ as food by the bees themselves.

[3292.] *Transferring Bees in Cold Weather.*—I am sending sample of comb from a stock of bees which in March last showed unmistakable foul brood, and with the intention of curing I put them in a skep for sixty hours, feeding with medicated syrup according to the formula in "Guide Book." I then prepared a new hive, with full sheets of foundation, and shook the bees from the skep on to a cloth placed before the hive. Since then I have fed them with good thick syrup (medicated), but on examining the hive a few days ago I was not at all satisfied with the look of the comb, and I have therefore destroyed the bees. I may say they were not very strong, and I feared for my other stocks. I would like your opinion, because if there is no disease I could utilise the combs. I also noticed that the combs contained eggs and nymphs only, there being no larvæ in the intermediate stages anywhere. 2. I am a regular reader of your valuable paper, and would like to know the earliest date on which my newsman could bring it, as I seldom receive it until Friday. I have hauled him over the coals about late delivery several times, but he tells me he brings it as soon as he receives it. Name sent for reference.—C. S., Bristol.

Reply.—1. The dead brood in comb shows no sign of disease, and has evidently died from lack of warmth during the recent cold nights. It was unfortunate that the bees were transferred to the new hive while the weather was so uncertain, as the mischief would be owing to the very cold nights we had in April. 2. The late delivery of B.B.J. must be the fault of the agent from whom your newsman gets his copies of our paper, which are in the hands of our London publishers on Wednesday. Why not get it from your railway bookstall? If ordered beforehand it should be thus obtainable on Thursday.

[3293.] *Queen Ceasing to Lay.*—On May 6, when examining one of my hives, I found no signs of brood or eggs except a few workers and drones just hatching out. This stock had been breeding well up to this, so my verdict was "Queenless." I inserted a frame of eggs and larvæ from another hive, expecting the bees to raise another queen, at the same time wondering why they had not done so in the first instance. Yesterday, May 13, I examined for queen-cells, but none had been formed. Concluding the queen, a 1904 one, was still to the fore, I looked over the frames, and soon spotted her. 1. I enclose this queen, along with a few workers, and would like to hear your opinion as to the cause of her infertility after, say, April 15? I changed frames into a clean hive on April 20, but did not examine closely for eggs. I wish to obtain some "Golden Prolific" queens from the new frames of eggs I have inserted. At what date should I make up nuclei? I send name as before, and sign—Carbon, Butterknowle, May 14.

Reply.—1. It may be safely said that the best days of the queen sent are over, and this is the only reason for its ceasing to lay. 2. Very full particulars regarding

forming nuclei are given in the "Guide Book" (Chapter XX.), which you already possess.

[3294.] *Using Old Combs* — Will you kindly reply to the following questions?—Two seasons ago I had a stock of bees (from which a swarm had issued), full of young bees and brood, attacked by wasps, the result being that the bees were killed and all the food carried off. Since then the hive has remained with the brood-combs untouched, and I wish to know:—1. If it will be safe to use it again if disinfected with carbolic acid? 2. Or would it be safer to get new frames and destroy the others? I could cut out the combs and melt them down for wax, if the others could be rendered fit for use again by cleaning, but I am afraid of getting foul brood among my hives, and so would be glad to have your advice before deciding what to do. I send name and address, but sign—G. B., Sideup, Kent, May 8.

REPLY.—1. If the bees were not diseased when attacked by the wasps, there need be no fear on that head now; therefore, nothing beyond clearing away all debris is required before using the hive again. 2. We should cut out the combs, burn all containing dead brood, and melt the rest down. The frames, if scraped and cleaned, will be ready for using again when required.

Bee Shows to Come.

A nominal charge of 2s. 6d. is made for notices (not exceeding 7 lines) in this column, 10 lines charged 3s. 6d., up to 15 lines 5s., which covers cost of insertion from order till date of show. Cash should accompany orders for insertion.

June 27 to 30, at Derby.—Royal Agricultural Society's Show. Bee and Honey Section under the management of the B.B.K.A. Increased prizes for B.K. Associations as arranged in divisions or groups of counties. Schedules from Edwin H. Young, Secretary, 12, Hanover-square, W. **Entries close May 29.**

July 25 and 26, at Cardiff.—Annual Show of the Glamorgan B.K.A. in connection with that of the Cardiff and County Horticultural Society. Honey, Wax, Appliances, etc. Classes for members, novices. Five open classes, with prizes for sections and extracted honey, 21s., 10s. 6d., 5s., in each class. Bee-appliances, 30s., 15s. Entry fee for one or more of the open classes to non-members, 2s. 6d. Schedules from Wm. Richards, Hon. Secretary, The Red House, Gabalfa, Cardiff. **Entries close July 20.**

August 8 to 10, at Middlesbrough.—Show of Honey, etc., in connection with the Royal Yorkshire Agricultural Society. Schedules and form of entry from John Maughan, Secretary, Blake-street, York. **Entries close June 30.**

August 30, at Montgomery.—Honey Show in connection with Horticultural Exhibition. Two open classes for six 1-lb. sections and six 1-lb. jars extracted honey. Prizes, 10s., 5s., 2s. 6d. Entry fee, 1s. each class. Schedules from Mr. W. J. Jones, Secretary, Montgomery. **Entries close August 23.**

Notices to Correspondents & Inquirers.

Letters or queries asking for addresses of manufacturers or correspondents, or where appliances can be purchased, or replies giving such information, can only be inserted as advertisements. The space devoted to letters, queries, and replies is meant for the general good of bee-keepers, and not for advertisements. We wish our correspondents to bear in mind that, as it is necessary for us to go to press in advance of the date of issue, queries cannot always be replied to in the issue immediately following the receipt of their communications.

CONSIDE (Consett).—The law of Parthenogenesis.—It is a fact that in bee-life there can be a reproduction without fecundation—*i.e.*, that drones raised from the eggs of an unmated queen can fertilise a young queen just as a normal drone can.

E. S. H. (Totteridge). — Dealing with Queenless Stocks.—Do not weaken your newly-purchased stock by taking from it frames of brood with the idea of saving a stock that is now queenless. Rather unite the bees of the latter (if worth saving) to the stock you are relying on for surplus this season, in order to strengthen the latter.

"QUEEN BEE" (Derby).—Honey Vinegar.—Your sample is very good in colour and aroma; the flavour, however, is not nearly strong enough for table use. It tastes like good vinegar watered down till spoilt.

H. C. SMITH (Cirencester).—Drone-breeding Queen.—You may be quite certain that the dead queen sent was unmated, and that the parent queen of the stock last year met with some mishap in the autumn, after which the unmated queen was reared.

(Miss) M. M. (Epsom).—Bees Dying Outside Hive.—The bees sent (well-marked Italians) are very young ones, and look as if they had been tempted out by bright sun on a cool day, and had become chilled and unable to fly. The trouble will no doubt disappear now that the weather is warmer.

Suspected Combs.

H. G. (Oakham).—There is no foul brood in comb, but it shows that the queen is a drone-breeder, and consequently the stock is worthless.

F. R. (Outwell).—Foul brood is developing in sample of comb sent, but it does not appear to be a bad case.

A. G. A. (S. Devon).—Sample shows a bad case of foul brood of old standing.

"BEE GARDEN" (Cumnor).—Foul brood is spreading fast in comb sent, and as bees are doing badly we should destroy the stock at once. It will only lead to mischief if you try to cure it.

A B.B.J. READER (Olney, Bucks).—There is nothing worse in comb than hard, mildewed pollen. No trace of any brood at all.

P. R. N. (Polperro, Cornwall).—The three pieces of comb all show marked indications of foul brood in cell-capping, but all trace of brood has dried up and disappeared. We should say the stock is diseased; but, to be quite certain, a few cells with the remains of soft brood should have been sent.

W. S. H. (Hereford).—The condition of comb sent fully accounts for the stock "dwindling down annually," as each fresh lot of bees hived on the old combs would soon be affected with foul brood, as comb sent undoubtedly is.

A. H. (White Colne).—There is no brood at all—foul or otherwise—in comb sent, but it is very old (apparently built from very thick foundation), and we should prefer to melt such combs down for wax and let the bees build new combs from foundation, as being the better plan.

*** *Some Letters, Queries and Replies, &c., are unavoidably held over till next week.*

Special Prepaid Advertisements.

Twelve words and under Sixpence: for every additional Three words or under, One Penny.

Advertisements for current issue must be received by first post on Tuesday.

WANTED, HEALTHY SWARM of BEES. Give good trio Silver Campines, laying.—R. LITMAN, Castle Cary. P 47

"NEVER SWARM" VIRGIN QUEENS, 2s. Fertiles, 1lb.; June 2s. 0d.; Queens, June, 3s. 6d.—Bucks. P 49

A GOOD all-round wire hair TERRIER BITCH 7s. 6d. Exchange for any bee goods.—SMITENWOOD, Offord, Cluny, Hunts. P 50

PRIME NATURAL SWARMS this season, as usual, all from first-class bar frame stocks, 12s. 6d. and 15s. each. Cases to be returned. (Telegrams, Wilkins, Letcombe Regis).—PERCY WILKINS, Letcombe Regis, Wantage. P 52

FOR IMMEDIATE SALE, SIX SWARMS, average weight 5 lbs. each, 12s. 6d. each. — F. R. COURT, Green Street, Sittingbourne P 53

GUARANTEED 1905 QUEENS, 4s. 6d. Safe arrival guaranteed. Large black Bee Veils, 1s. 1d., post free.—TOLLINGTON, Woodbine Apiary, Hathern, Loughboro'. P 54

I AM NOW BOOKING ORDERS for early Natural Swarms of my well known strain of Bees. Early application is desirable. First come, first served. 3 lb., 10s. 6d.; 4 lb., 12s. 6d.; 5 lb., 15s. Boxes charged 3s. each if not returned. Health and safe delivery guaranteed.—CHARLES H. BOCOCK, Ashley Apiaries, Newmarket. P 54

WANTED, TWO STOCKS, in Standard Frames.—EAGLES, Mayfield, Holly Lane, Erdington, Birmingham. P 55

NATURAL SWARMS, 10s. 6d. and 12s. 6d.—R. CARTER, Chartridge Green Farm, Chesham, Bucks. P 56

QUEEN EXCLUDERS.—Four dozen Queen Excluders, plain margin all round, 4s. 6d. dozen (cost 7s. dozen). Also six sheets, 96in. x 16in., 2s. each (cost 3s. 6d.). Also two dozen plain sheets (roof zinc), 24in. square, 6s. 6d. dozen (cost 9s.). All new. No further use to owner.—G. STANBROOKE, 30, Rumford Street, Chorlton-on-Medlock, Manchester. P 57

FOR SALE, owing to removal, TWO HIVES of healthy BEES.—E. ASQUITH, Farnham, near Knaresboro', Yorks. P 58

STRONG HEALTHY TOMATO PLANTS, greenhouse or open air, 1s. dozen, post free. Chapman Honey Plants, 6d. each.—F. W. GELDER, Sturton-by-Stow, Lincoln. P 59

FOR SALE, SMALL APIARY, 25 Stocks, in Standard Hives, splendid condition, nearly new; BEE HOUSE, thorough complete outfit; bargain.—EMM, Winterbourne, Stoke, Salisbury. P 60

QUEENS BY RETURN OF POST, reared 1905, healthy, 5s. each.—O. KNIGHT, Epney, Stonehouse, Glos. O 49

WANTED, unlimited quantity, TILLEY'S PATENT ("Won't Leak") 2-lb SECTIONS, completed by the Bees, in quantities to suit producers, soon as ready.—M. H. TILLEY, Bee Farm, Dorchester. P 67

HEALTHY SWARMS BOOKED NOW.—May, 2s. 6d. lb.; June, 2s. lb.; Queens, June, 3s. 6d.—HEMMING BROS., Standlake, Witney. P 24

TILLEY'S PATENT ("Won't Leak") SECTIONS.—Only a limited quantity can be delivered this season unless ordered early. After June 1st prices will rise. Particulars post free.—J. T. GODWIN, Agent, Dorchester. P 66

EXCHANGE one Buff Yorkshire cock Canary and three Norwich hens for Hive of Bees.—C. MURCH, Ringmore Road, Shaldon, Teignmouth, Devon. P 65

STRONG HEALTHY NATURAL SWARMS, 12s. 6d. Skeps free. Safe delivery.—CADMAN, Codsallwood, Wolverhampton. P 64

SECTIONS CLEARANCE, 16s. 6d. per 1,000; 2s. per 100; plain, 4¼ 4-way.—GORDON, Bassingbourne, Royston. P 63

NATURAL SWARMS, guaranteed healthy, 1905 Queens, 12s. 6d., carriage paid.—ARNOLD, Obelisk Road, Woolston, Hants. P 62

7S 6d. HIVES, 7s. 6d.—The Beekeeper's opportunity, standard size, with super complete, painted. Illustration sent.—OZONE APIARY, Trimingham, Norfolk. P 45

SWARMS of "YE OLD ENGLISHE BEES."—Having so many orders already booked I cannot promise others till after June 15. Prices 10s. 6d., 12s. 6d., and 15s. Packing boxes free and safe delivery.—W. WOODLEY, Beedon, Newbury.

4 STRONG HEALTHY STOCKS, in well-made hives, 25s. each.—A. COOK, "Torwood," Ford Bridge Road, Ashford, Middlesex. P 41

CHEAP.—EIGHT NEW HIVES. Must be sold, owing to removal. Stamp please for particulars.—PRITCHARD, Wainalong Road, Salisbury. P 40

SECTION HONEY WANTED, pale colour, free from granulation.—T. SMITH AND CO., 17, Cambridge Road, Hyde Park, London, W. R 32

QUEEN REARING.—No trouble to work; no expensive appliances; can't fail; four cages and full instructions, 2s. 6d. — MEADOWS, Syston, Leicester. P 33

NATURAL SWARMS NOW BOOKED.—May, 3s.; early June, 2s. 6d.; later, 2s. lb.; returnable box.—PRESBYTERY APIARY, Marnhull, Dorset. P 30

PRIME NATURAL SWARMS, expected end of May and early in June (no artificial swarms made in this apiary). I guarantee them natural, healthy, and also safe arrival. May, 3s.; June, till 15th, 2s. 9d.; after 15th, 2s. 6d. per lb.; 1s. allowed on all empty boxes returned carriage paid.—S. BAILEY, Itchingfield, near Horsham. P 27

SALE OR EXCHANGE, Fowls for Bees, Cook-Tammadge best laying strains, White Wyandotes, 1905 hatched, 4s. 6d. each.—SHACKLETON, Thorner, Leeds. P 25

Editorial, Notices, &c.

BRITISH BEE-KEEPERS' ASSOCIATION

The monthly meeting of the Council was held at 105, Jermyn Street, S.W., on Thursday, May 17. Mr. T. I. Weston in the chair. There were also present Dr. Elliot, Messrs. F. J. Bernau, W. Broughton Carr, J. B. Lamb, A. G. Pugh, F. B. White, and the Secretary.

Letters explaining enforced absence were received from Mr. T. W. Cowan, Mr. T. Bevan, Mr. R. Godson, Mr. W. H. Harris, Mr. W. Richards, and Mr. E. Walker.

The minutes of the previous meeting were read and confirmed.

Two new members were elected, viz.:—Miss E. M. Rix, Studley Horticultural College, and Dr. H. W. L. Waller, Brownlow House, Midland Road, Bedford.

The report of the finance committee was presented by Mr. Weston, and formally approved. Several appointments of examiners were made to officiate at approaching fixtures.

The secretary announced that arrangements had been made for the acceptance of entries for the "Royal Show," at Derby, in June next, at ordinary fees, up to and including May 29.

Some correspondence relating to examinations and insurances was read to the meeting, and discussion thereon postponed till the next meeting.

The remainder of the sitting was devoted to hearing lectures by nine candidates for first-class certificates, and adjudicating thereon.

The next meeting of the Council will be held on Thursday, June 21.

Correspondence.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

**** In order to facilitate reference, Correspondents, when speaking of any letter or query previously inserted, will oblige by mentioning the number of the letter as well as the page on which it appears.*

NOTES BY THE WAY.

[6305.] The weather is the bee-man's chief topic when he meets his brother-craftsman, and as we are now in the fourth week of May, with very few real bee days during the spring so far, one has not much cheering news to disseminate in a friendly bee-chat. So far as regards my own apiaries I do not remember having had so many backward stocks at this advanced period. In former years we have usually been dispatching swarms and busy putting on supers; but this year we are employed in feeding the bees, and although they have not been neglected by any means, there has not been the customary increase in the strength of stocks, as a result of stimulative feeding, as in previous years. I expect the loss of bees through getting chilled when out foraging in the bleak fields has more than counterbalanced our efforts in the apiary, so that the building-up of stocks has been slower than usual.

We have, of course, many strong colonies which—given a week's real bee-weather—would soon render a good account of themselves, but there has not been a good rain in our district for nearly six weeks, nothing more than slight showers; consequently, vegetation is backward, with every prospect of a light honey-crop.

[Later.]—We have had a heavy rainfall, lasting for several hours, and things once more look hopeful, so that, with sunshine, we may soon be as joyous as the bees in a clover-field. I therefore advise all readers to continue their preparations for a real good season, and depend upon it we shall get some honey. Those who are wise enough to have everything in readiness may easily double the quantity compared to the dilatory ones, who let things go as they please.

Starting Bee-keeping.—I trust our readers who contemplate making a start with bees will pardon reiteration, but I feel certain that if new recruits would begin with new hives and new swarms and we are favoured with anything of a bee season, they would reap a better return than by purchasing secondhand stocks. The latter, if healthy and strong, are, no doubt, a good investment, but if the slightest doubt exists as to their healthy condition, then I say, by all means buy swarms. The advantages are manifold. The stock will be healthy, to start with; the combs all new, and consequently ready for good work in succeeding seasons, and, with good management, will produce honey enough to more than pay for themselves this season; whereas the purchased stock may prove a source of trouble and expense, especially should foul brood be present.

Wax Moth.—When putting on supers be sure to destroy every trace of these pests; the early larva is often to be found in the sawcut of top-bars, or an occasional moth may be found in the warm wraps over the frames, especially where old material is dropped into the hives over the frames. Also keep a look-out for queen wasps; they often seek shelter in the roofs of hives where they can find an entrance. Every wasp destroyed now prevents a nest being formed later on, but the wax moth is our worst enemy next to foul brood. — W. Woodley, Beedon, Newbury.

SCOTCH HEATHER HONEY

AT LESS THAN 3D. PER LB.

[6306.] The letter which Messrs. Ingram Bros. and Co., 34, Robertson Street, Glasgow, send through their solicitor, Mr. Ross, as a reply to our letter in your issue of 26th ult., is certainly a remarkable document. It states that our services as Messrs. Ingram's London agents "were recently dispensed with."

That statement is quite true, in the following sense:—Our services were dispensed with because Messrs. Ingram could make no proper answer to the challenge which the Editors of the B.B.J. made to us relative to the origin of the honey which we were offering on their behalf.

The letter of Messrs. Ingram's solicitor goes on to state:—"Messrs. Shaw Bros. have made other statements about my clients which they had to withdraw and apologise for." This would imply that we had made statements to persons other than Messrs. Ingram, and had to withdraw those statements, which is not the case. The facts are as follows:—When Messrs. Ingram made unsatisfactory replies to the challenge of the Editors of the B.B.J., we were prompted to make other inquiries about their position as syrup merchants, and were informed that Messrs. Ingram were packers, but not refiners of syrup. As Messrs. Ingram had informed us that "we refine all our own syrups," we demanded an explanation from them. A day or two later, the inquiry office said that an error had been made by their clerk, and that Messrs. Ingram did refine syrup. We, therefore, withdrew and apologised for our remarks under that head.

We may say that, a few weeks later, we were introduced by the Eastcheap firm, that had the "Pure Scotch Heather Honey," to an American firm which had been supplying Messrs. Ingram with American syrup. So much for that.

The next paragraph in that remarkable letter from Messrs. Ingram's solicitor says:—"The honey in question is absolutely pure, but faulty, and my clients succeeded in putting it right." As a matter of fact, after keeping the "Heather Honey" for four or five months, our customers had to mix it with other honey, and sell the lot off cheap, as Messrs. Ingram's "Heather Honey" refused to set.

We enclose the name of our customers—an Eastcheap firm of high standing—and you are at liberty to write to them for confirmation of our statement. They complained frequently about the honey not setting.

The next, and most amazing passage in the letter of Messrs. Ingram's solicitor, says Messrs. Ingram "demur to a comparison between a retail price in glass packages and honey sold in bulk in barrels."

In other words, although bee-keepers in Scotland can easily obtain from 1s. 4d. to 1s. 10d. per lb. for their heather honey, they are going to sell it to Messrs. Ingram at such a figure as will enable that firm to offer it in London, in 5½cwt. barrels, at about 2¾d. per lb.!

Their solicitor is certainly wise in advising Messrs. Ingram "not to indulge in correspondence through the Press."—SHAW BROTHERS, 12, Idol Lane, London, E.C.

BEE-NOTES FOR MAY.

[6307.] The present month as yet has been only faintly suggestive of summer. Bees have had few opportunities of sipping new honey from fruit bloom, or of gathering pollen to supply the rapidly-extending brood-nests. To-day has been bitterly cold, and snow is falling as I write, while the surrounding hills are freshly clothed in winter's mantle.

Bees as Spearmen. — This is literally a sore subject on which to dilate, the pain incidental to the onset of the angry bee being seldom mitigated by the sympathy of our fellow mortals. Nay, the latter invariably seize the opportunity to perpetrate choice witticisms at the expense of the stricken.

It was during the lamentable season of 1902 that certain unguarded manipulations on my part had their reward in the shape of the familiar "big eye." Whereupon the head of the household unfeelingly remarked, "The bee-man has a 'trade mark' to-day, but the 'trade' isn't worth a 'mark' this season," and thereafter spent the remainder of the day chuckling over his cruel joke. However, "all things come to him who waits," and it came to the joker in the shape of a vicious hybrid that "sat down" on *his* eye with terrible effect, just on the eve of his taking a long railway journey south. On another occasion I offered to show the interior of a hive to a friend whose love for honey is equalled only by his dread of the rightful owners. Concluding that the mysteries of the hive were best witnessed from a distance, he stood afar off, while I plied the smoker. A little bee, however, surprised at such exceeding modesty, went out of its way to whisper encouragingly in the fearful one's ear! The latter, scenting danger, thereupon, with arms wildly waving, implored, beseeched, prayed for mercy, his legs the while executing a rapid retrograde movement. The hitherto friendly bee naturally took the gesticulations as a challenge to "come on," and promptly gave battle with great vigour. The unequal fight could have only one ending. I was trying to recover speech to ask whether

this was a variation of the "cake walk," when the evolution suddenly ceased, and a voice in accents of despair exclaimed, "I've got it." "Where?" "On the nose!" Going back to business, displaying swollen features was quite bad enough without the passing of the comment that if he had not made his mark among the bees the latter had certainly made a mark on him. — J. M. ELLIS, Ussie Valley, May 16.

DEALING WITH EARLY SWARMS.

[6308.] You may be interested to hear my experience of early swarms this year. I have four hives, numbered 1 to 4. On May 4 my gardener told me that a swarm had issued from No. 1, which is headed by a Carniolan queen, but that it had returned. I opened the hive, and it was clear that the swarm had not returned, but had flown away and was lost. This hive then had eleven frames in body-box. I took out nine of these and replaced with eight empty combs, and, after setting a queen-excluder above, I filled a second body-box with the frames of brood without bees, which I had removed from below. I then had ten frames above and ten below the brood-chamber, and thought this would prevent further swarming.

On May 8 a good swarm issued from No. 2, headed by a hybrid Carniolan queen. This swarm I put in to strengthen a weak colony in No. 3, and they are doing well with two supers on. On May 12 a "cast" issued from No. 1 which I returned to the parent hive in the evening, and in order that the queen and the princesses might fight out their quarrels I covered the entrance with queen-excluder zinc. The enclosed photograph, which I took on the next day, will show you how this experiment affected the bees. On the 13th a "cast" issued from No. 2, but went back again in the evening, and I put a piece of queen-excluder over the entrance to this hive also.

On the 17th I removed the queen-excluder from the entrance to No. 1, and next day another "cast" came out. The bees were returned in the evening, and I put in three extra frames of foundation, though there was apparently plenty of room in the hive, several frames not being fully worked out. All this swarming is very interesting, but as I have not much leisure I shall be very glad if any of your readers can suggest a satisfactory remedy. I send name for reference.—A. W., Orpington, May 18

BEES AND BEE-KEEPING.

IN SOUTH AFRICA.

[6309.] The bee industry must be looking up. We are having letters, to use a slang phrase, from "all over the shop." One writer inquires—Which is the best hive, the American or English? The Yankees are undoubtedly pushing their style of hive, and, locally, I think they have the majority in use. We have both the English and American in use, and I have no hesitation in saying that for this hot country the English type of hive is preferable for the following reasons:—The English hives we have are made on the contracting principle. When you put a swarm in them, the bees can, by means of the dummy, be confined to any number of frames you wish. As they increase, the dummy can be drawn back and more frames put in. The frames of English make are not so large, consequently the combs are not so liable to break under manipulation. The hives are larger, and this, I have no doubt, is a great advantage in lessening swarming. I think this is one of the most important phases of the bee-keeping industry. A swarm of bees here has but little, if any, monetary value, and I have no hesitation in saying if swarming could be prevented the yield of honey would be double what it is now. I have seen no extracting frames with the American hives. I believe they have hives adapted for that, but I have not come across one. The people here seem to prefer honey in the comb. I do not know the reason of this, unless they think it is a guarantee of its purity. The wax is of no use as food, and good extracted honey for general purposes is much to be preferred, to my mind, than honey in the comb. By the way, I have been told that honey is a capital remedy for wounds. There is no question that honey for medicinal purposes is largely used, and has been proved very beneficial to many of nature's ills. — J. MARTIN, Wagon Drift Farm.—*Farm and Stock*, March 26.

THE USE OF QUEEN-EXCLUDER.

[6310.] Hitherto I have always used queen-excluders, but at the beginning of this season I decided to work three of my strongest hives with supers of shallow-frames without the excluders, their first supers having remained in place over the brood-chambers ever since last autumn. I may say this is my usual plan of working. On April 16 our expert came, and, after examining my stocks, he said, "If those hives were mine I would super at once." Acting on this advice I did super them, and omitted the queen-excluders between first and second supers, with the following results:—On May 18, a glance through the glass covering top-bars (a great comfort —to the bees and myself) showed me that the bees were ready for still another super. Then came a surprise, for on lifting the centre frames in order to see how honey-gathering was progressing, I found a quan-

tity of drone-brood along the bottom part of the frames, the top part being nearly full of honey. Thus I saw that the queens in those three hives had travelled up from the brood-chambers through the first supers and into those overhead—a proceeding I strongly object to. The first super the queens were welcome to, but I cannot stand them leaving their legitimate breeding quarters and taking to the second supers.

In my practice the first super forms an extension of the brood-chamber; but, for the rest, I strongly advise readers to put the queen-excluders in place between the first and second supers *at once*. It is another lesson I have learnt, and certainly I shall not leave them out again. — W. C. H., South Devon, May 19.

EARLY SWARMS.

[6311.] I saw in last week's JOURNAL a paragraph headed "First Natural Swarm of 1906," giving May 5 as the date. I had one on the morning of May 3, thus beating the above by two days.

Although just entering on my third season as a bee-keeper, this is the first swarm I have had to deal with. When I closed them up next day the bees crowded five frames. I gave them syrup, but otherwise left them undisturbed until this morning, when I lifted out the frames to look for brood, but found none, although the bees were busily carrying pollen both yesterday day and to-day. I cannot answer for other days as I am away all day. Is it too early to expect brood?—A. G. M., Eltham, Kent.

BUYING DISEASED BEES.

[6312.] Referring to the letter in last week's B.B.J., headed "Risks in Buying Stocks of Bees" (6302, page 196) may I ask if Mr. J. Gray omitted to say in his letter—or are our Editors too modest to inform readers—that the stock of bees referred to was purchased through an advertisement in a paper not devoted specially to bees and bee-keeping, as is the BRITISH BEE JOURNAL?—GEO. ROSE, Gt. Charlotte Street, Liverpool, May 18.

[Mr. Gray's letter gave no indication where the advertisement in question appeared, and we naturally inferred that the B.B.J. was meant.—EDS.]

QUEEN VAGARIES.

[6313.] On the 7th inst., a number of students were working with me in the apiary at Swanley. Amongst the hives stood a skep in which to my certain knowledge the bees were dead at Christmas. The cake of candy had been allowed to remain over the feed-hole in top of skep.

One of the students, being anxious to see what the inside of a skep was like (never having seen one), asked permission to examine the skep in question, which was, of course, given. Before lifting up the skep she removed the cake of candy, and on the underside chanced to see a bee, which she knew at once was not an ordinary worker, and I was therefore asked to "come and see it." This bee was a queen, and to all appearance dead, but on warming her in my hand, she commenced to move, and, on being fed with liquid honey, was soon very lively running about as if nothing had happened.

This queen was introduced to a small nucleus colony, and on May 14 was well, and had laid a number of eggs.

It is difficult to say how the solitary queen could have got into the skep referred to, as there was not a single bee alive or dead in it at the time; neither were the bees from other hives flying very much, as the morning was cold.

Later in the day all the hives near were examined, but none had lost their queens recently.—W. HERROD, F.E.S., Luton.

HOME-MADE HIVES AND APPLIANCES.

[6314.] As a somewhat enthusiastic bee-man I am much interested in making my own hives and all other requirements for use in the apiary, and, after reading the very useful articles on home-made hives which have appeared from time to time in past years, and noting the great saving in cost of same, I determined to try making them myself, and am now sending a few lines in the hope that the result of my efforts will be of some interest to others.

The photo. sent shows the actual hive and its several parts, as exhibited by myself at the show held at Plymouth in November last, and regarding which the judge (Colonel Walker), in his report, said: "A hive of most unusual excellence."

I am an engine-fitter by trade, and I hope this praise will not be considered too high when it is borne in mind that the hive and all its parts (including frames) were made from used boxes. I append a list of materials used and cost of same:—

OLD MATERIAL.	s.	d.
Six tea-chests (3d. each)	1	6
Part American bacon-box	0	6
Pieces from firewood-store for legs	0	4
Three empty jam-tins	0	1½
Two American preserved-pear cases	0	2
NEW MATERIAL.	s.	d.
Three cones at 1s. per dozen ...	0	3
Forty "W.B.C." ends	0	10
Sixteen "W.B.C." wide ends ...	0	5½
Half of queen-excluder	0	4
Zinc for ventilator	0	2
Two dozen screws	0	2
Wire and nails for frames ...	0	2
Total cost	5	0

I am sending one of my frames along

with photo. for our Editors' opinions of same with regard to its fitness for general use.—F. J. RICHARDS, Plymouth.

[The frame sent is as good as any we have ever seen, whether made by machine or hand.—EDS.]

NOTES FROM MIDLOTHIAN.

[6315.] April opened with splendid bee-weather; the hum about the hives made one feel sure that summer had come. The bees have been busy carrying in the brown pollen of the elms, more freely this year than I have seen before. Then the weather broke, and unfortunately little has been done since. Hives with plenty of bees now require food to keep them going. I find some of my stocks scarce in bees have plenty of stores, mainly, I suppose, of there being no bees to consume the food. I was looking at a book lately (a modern one) and became much interested in it till a passage occurred wherein the author advocated a 40 lb. feeder! This was an Italian specialty. Small wonder that our friend, "D. M. M." holds on to the blacks. Whatever their faults, they do not require feeding at this rate! I was also interested in the exploits of your correspondent, "Humble Bee" (6271, page 144), with his fishing-rod. I have read a deal on queen-mating, but fishing for drones with a virgin queen as bait fairly "takes the cake."—MAC, Midlothian.

HOME-MADE HIVE.
(Made from used boxes.)

ESSEX AND SUFFOLK B.K.A.

[6316.] Our association is holding an exhibition of interesting and instructive articles connected with apiculture at the Essex Agricultural Show, Brentwood, on June 13 and 14 next. I shall be glad if any of your readers will kindly assist us in this matter by lending anything connected with bee-keeping which would be of general interest. I need hardly say the greatest care would be taken of such and carriage both ways would be gladly paid by us.—G. R. ALDER, Secretary E. and S. B.K.A., Rawreth, Wickford, May 17.

Queries and Replies.

[3295.] *A Beginner's Queries.*—I see you gladly give advice to readers, so I am asking the favour of replies to the following questions:—1. I have this spring commenced keeping bees in frame-hives. I had them before in skeps, but some time ago I placed the strongest stock over the body-box of a frame-hive, for transferrence to the latter, as recommended in the "Guide Book." The skep has been on it now for five weeks, yet the queen has not commenced to deposit eggs in lower hive, although the skep is crowded with bees. Do you not think she is a long time going down? 2. I thought of working it on doubling system. Will there be time to follow that plan this season? Then, with regard to stock No. 2. This is a weak lot, although they have been well fed with syrup. Bees not very numerous. 3. Do you think if I had another queen it would become strong in time for this season's work? And, if so, which do you recommend for a beginner, an Italian or a Carniolan queen. 4. How would you introduce an alien queen into a skep? 5. Being in a skep, how would you capture an old queen? Is it done by driving the bees into another skep? I have a new hive waiting for them as soon as they are strong enough. 6. How can I examine the

skep to see if foul brood is present? 7. I have been told that when a bee loses its sting the other bees will not let it enter the hive. Is this so? I see in "Guide Book" you recommend manipulating bees without veil, but either mine are an exceedingly vicious lot, or I do not work them right. I am as careful as I can be. What should I do to escape stings? I hope you will forgive the length of this letter. — T. H., Bexhill-on-Sea.

REPLY.—1. If the lower hive is properly prepared, the bees will work down into it as soon as the queen requires egg-room. 2. You had better keep to present plan; the doubling system is not suitable for a beginner. 3. If the weakness is due to its having an old worn-out queen, it might be worth while to replace her by a young one; but, if foul brood is the cause of weakness, it is not worth your while to trouble about the stock at all. It had best be destroyed. 4. We advise you not to try this operation yet. 5. In capturing the queen of a skep, the bees must be driven in the usual way, and the queen caught as she passes into the empty skep. 6. You cannot do it. A skilled hand may, but not an amateur. 7. No. 8. The "Guide Book" does not recommend beginners to discard a veil when manipulating hives; quite the contrary, it only advises handling frames without gloves, if possible.

[3296.] *A Lady Beginner's Bee Troubles.*—I am a beginner, and so have come to you for advice. Can you tell me if the enclosed cell was a queen-cell, as I cut it out from the middle of the comb, and it was hanging downwards, as is usual with queen-cells? I am anxious that my bees should not rear any queens this year, as I do not want them to swarm, and, with this in view, cut out, what I thought was a queen-cell. 1. Have I done right? I ask, as the "Guide Book" advises cutting out queen-cells to prevent *after* swarms. I only started last July with a swarm, and the bees have wintered well, and are now covering eight frames, and drawing out the foundation of the last two, so I have put on a rack of sections. 2. Is that right? I send name and address, and sign—R. S. T., Essex.

REPLY.—1. As nearly always happens, when insufficiently protected for post, the so-called queen-cell and contents was smashed flat when received. We cannot, therefore, say for certain whether or not you have done any good by removing it; but, in any case, no harm will follow. 2. Yes; quite right.

[3297.] *Surplus Chambers for Use on Skeps.*—I am thinking this year of supering a stock of bees on skep instead of transferring bees and combs into a frame-hive. Will you therefore kindly inform me:—1. Whether it would be advisable to use queen-excluder between the hive and super? The hole at the top is only about two inches in diameter. 2. Also please say whether bees procure both honey and pollen from the sycamore, holly, or chestnut blossom Please reply to—T. S., Carlisle.

REPLY. — 1. A piece of queen-excluder zinc is always nailed to bottom of the section-box, used on top of skeps, as a surplus-chamber. But it needs very careful and warm packing so as to make the surplus chamber snug and warm, or bees will not enter a super of that kind. 2. Bees in some seasons gather a fair amount of honey from the sycamore; but the quality is only poor. The holly also yields both honey and pollen freely in some seasons. The horse-chestnut is also a honey and pollen-yielder, but is rarely included among bee-forage plants, for its honey is only third-rate in quality.

[3298.] *Queen Cast Out in May.*—I beg to thank you for your kindness in answering my query (3248, page 139). On April 4, with the help of a friend, I transferred the stock, mentioned in above query, to a new hive. We found things in a first-rate condition, a very strong stock, with eggs and larvæ, unsealed and sealed. We could not see the queen. On April 9 I inserted a sheet of "Weed" foundation, and on May 3 this was a compact mass of worker brood, all sealed over. I then inserted another sheet, and when again examined on May 7 the latter had an egg in nearly every cell, and the brood in the former was nearly all hatched out. I then inserted a third sheet. I may mention that I inserted these sheets of foundation because the combs were so full of honey; and on April 9 I saw several queen-cells containing the same kind of thick white matter spoken of in my former letter. I therefore ask: 1. Can you tell me what this substance would be? On May 12, having become suspicious of wax-moth, I made a close examination, and while doing so discovered on the third sheet of foundation given (now built-out comb) a queen bee. It was perceptibly smaller than the one enclosed, which was found dead in front of the hive yesterday. 2. Will you kindly tell me if it is old or young, virgin or otherwise, and can you account for its being found as stated? Your correspondent "J. M. Ellis" may be interested to hear that the stock in question was wintered as he describes on page 174 of B.B.J., May 3, but, in addition, the roof had never been painted, and let the wet in grievously; so I suppose the present condition of the stock is due more to good luck than good management. I may say the queen seen on May 12 was moving about on the comb like an ordinary worker, and

the bees were taking no more notice of her than if she were one of themselves. Thanking you in anticipation, I sign as before—CHAMBIST, Lincs., May 14.

REPLY.—1. The thick, white, milky fluid seen in queen-cells is known as "royal jelly," and is given very abundantly to the queen larvæ during the first five days after the egg hatches. 2. The dead queen sent was no doubt the queen, or mother-bee, of the colony, and has either been accidentally injured during your rather too frequent examinations or been killed and cast out by the bees themselves, as they sometimes do when the hives are overhauled too frequently in spring. If the young queen is safely mated the stock will go on all right, but the mishap is a bad set-back to your chance of a good harvest this year, as the parent queen seems to have been a prolific breeder.

[3299.] *Drone-breeding Queens.*—Enclosed herewith I send part of a comb cut from a friend's hive to-day. The brood is all in the same condition in the remaining frames, and I shall be greatly obliged if you would say in B.B.J. what you think is wrong? There is a queen in the hive, but we are afraid she is a drone-breeder. 1. Do you think this is so? For some time back the stock has been casting out dead grubs, and so I ask: 2. Is this caused by chill? 3. As there are still a good many bees in the hive, would it be advisable to unite them to another stock, or would it be preferable to destroy the old queen and insert a new one? I send name for reference, and sign—LOCHFYNE, Argyleshire, May 12.

REPLY.—1. It is quite certain that your fears are well founded, and that the queen is worthless. 2. The casting out of drone larvæ is one of the effects of the stock's abnormal condition, for the brood is allowed to die for lack of warmth. 3. The bees are hardly worth the trouble and cost of saving. They will all be old and consequently worthless.

[3300.] *Bees Dying Off at End of April.*—During the last fortnight the bees in one of my hives have gradually died off, crawling out of the hive and rolling down the flight-board and dying on the grass. I shall feel obliged if you can suggest, through your paper, any cause, and advise me how to avoid a recurrence of the mischief. I may say the adjoining hive is perfectly strong with healthy bees. I have been a reader of your valuable paper since I started bee-keeping last May, and have found it a great help to me. I enclose a few bees for your inspection.—A. H. TOMLINSON, Durham, May 1.

REPLY.—There is nothing in the appearance of dead bees (hybrids) to account for death. They may possibly have died from starvation. It would help to settle this point if you will examine and find out the condition of stores in the hive. If food is there in plenty, we should suspect poison, through some of the poisonous compounds used for clearing fruit trees from blight of some kind.

[3301.] *Queen Not Laying.*—I enclose a queen bee from a hive I bought last year. She laid well last season and built up a strong colony, but the stock did not swarm; but this year she has not so far laid any eggs at all. There are just about as many bees as cover two frames only. Can you say what is wrong? I do not know her age. I have now put in a frame with eggs.—A. B. B., High Blantyre, N.B.

REPLY.—The queen sent appears old and nearly worn out, while the few bees left are unable to raise the hive temperature sufficiently for hatching brood. The remaining bees may be united to another stock, but they are hardly worth saving, because—like the queen—they will be old and useless as workers.

[3302.] *Dealing with Foul Brood.*—The enclosed comb was taken from one of my four hives, and I would ask for your opinion, whether it contains foul brood or not? It is the only frame of eleven in the hive that looks so suspicious. I look forward to the bright little B.B.J. every week, and devour it before I go to work; in fact, I wish it was larger, as I read and re-read all the past numbers in my possession, also, I may say the same of our *Bee-keepers' Record.* I send name and sign—ADMIRER, Surrey.

REPLY.—We are sorry to say a few cells in comb are affected with foul brood in pronounced form. The comb also contains fresh-gathered pollen, and eggs are seen in every vacant cell, showing that the queen is very prolific, and that the stock would probably do well if free from disease. If you can spare time to attempt remedial measures we should get the bees off their present combs and treat them as a swarm, after starving for a time, as directed in "Guide Book."

Bee Shows to Come.

A nominal charge of 2s. 6d. is made for notices (not exceeding 7 lines) in this column, 10 lines charged 3s. 6d., up to 15 lines 5s., which covers cost of insertion from order till date of show. Cash should accompany orders for insertion.

June 12-15, at Portsmouth.—Show of Honey, Hives, etc., in connection with the Royal Counties' Agricultural Show. For schedules, apply to E. H. Bellairs, Bransgore, Christchurch, Hants.

June 27 to 30, at Derby.—Royal Agricultural Society's Show. Bee and Honey Section under the management of the B.B.K.A. Increased prizes for B.K. Associations as arranged in divisions or groups of counties. Schedules from Edwin H. Young, Secre-

tary, 12, Hanover-square, W. **Entries close May 29.**

July 18, at Ashby-de-la-Zouch.—Leicestershire Show of Bees, Honey, and Appliances, in connection with Annual Flower Show. Three open and two local classes, and one L.B.K.A. Bee demonstrations. Schedules from J. H. Dunmore, Secretary, Alandale, Ashby-de-la-Zouch. **Entries Close July 16.**

July 19 and 20, at Gainsborough.—Show of Honey, Hives, and Bee Appliances in connection with the Lincs Agricultural Society. Bee Department under management of the Lincs B.K.A. Fourteen classes. Liberal money prizes and silver medals. Schedules from R. Godson, Hon. Sec., Lincs B.K.A., Tothill, Alford, Lincs. **Entries Close June 15.**

July 25 and 26, at Cardiff.—Annual Show of the Glamorgan B.K.A. in connection with that of the Cardiff and County Horticultural Society. Honey, Wax, Appliances, etc. Classes for members, novices. Five open classes, with prizes for sections and extracted honey, 21s., 10s. 6d., 5s., in each class. Bee appliances, 30s., 15s. Entry fee for one or more of the open classes to non-members, 2s. 6d. Schedules from Wm. Richards, Hon. Secretary, The Red House, Gabalfa, Cardiff. **Entries close July 20.**

July 29, at Chester.—Cheshire B.K.A. Show in connection with the County Agricultural Society. Open classes for Hives, Observatory Hives, Sections, and Extracted Honey. Baroness Burdett Coutts' prize hive for best exhibit shown by cottager member. Seven classes for members. Schedules from T. A. Beckett, St. Werburgh Chambers, Chester. **Entries Close August 8,** or at double fees, **August 15.**

August 8 to 10, at Middlesbrough.—Show of Honey, etc., in connection with the Royal Yorkshire Agricultural Society. Schedules and form of entry from John Maughan, Secretary, Blake-street, York. **Entries close June 30.**

August 16, at Yetminster, Dorset. — Annual Show of the Yetminster and District B.K.A. in St. Mary Head. Four open classes, including three 1-lb. jars extracted honey, three 1-lb. sections, and cake of beeswax. Schedules from G. Leeding, Hon. Sec., Bradford Abbas, Sherborne. **Entries close August 10.**

August 30, at Montgomery.—Honey Show in connection with Horticultural Exhibition. Two open classes for six 1-lb. sections and six 1-lb. jars extracted honey. Prizes, 10s., 5s., 2s. 6d. Entry fee, 1s. each class. Schedules from Mr. W. J. Jones, Secretary, Montgomery. **Entries close August 23.**

Notices to Correspondents & Inquirers.

VERITAS (Four Oaks).—Advertising Bees for Sale.—We cannot say if the reply given nine months ago refers to the person you name. If you fear disease in your stocks the best course is to have them inspected by a qualified bee-keeper.

HEXAGON (Mears). — The "Stewarton" Hive.—If the bees are strong and numerous at this season, with a vigorous queen heading the stock, as stated, the only steps you need to take in order to have them in good order by the first week in July, if food is short.

J. C. T. (Suffolk). Drone-breeding Queen.—The queen of hive in question is utterly worthless. It is no use taking trouble to utilise bees from the hive headed by a drone-breeding queen. They are also of no use, and should be destroyed.

E. FIRMINGER (Bristol).—Dead Larvæ Cast Out.—There need be no alarm at a few dead larvæ being cast out of hives during the extreme cold weather we have had during this month. The soft portion of the dead grubs may have been eaten away by predatory insects outside the hive.

C. H. T. (Horsham).—Starting Bee-keeping.—The five queries sent make it clear that you are quite inexperienced in bee-work, and the "Guide Book" just sent will make many matters plain about which you were in the dark. We may, therefore, reply briefly as follows:—1. Full instructions for uniting bees appear on pages 104 to 107. 2. The most suitable plan for you will be interchanging frames, as directed on page 106, but use flour in preference to scented syrup, as mentioned in final par of chapter. 3. A few drops of warm syrup poured on the bees may induce them to take the food. 4. Pollen-carrying is a fairly safe sign that the stock is not queenless. 5. Leave off feeding as soon as honey is being got from natural sources.

G. C. (Sheffield).—Using Old Combs.—When combs are very old and black they should be renewed gradually by taking away the worst at this season, and substituting a full sheet of foundation in centre of brood-nest at intervals of about a week. Two or three combs are enough to renew in one season.

LONDON HILL (Darvel).—Soluble Phenyle.—This may be had from Morris, Little, and Son, Ltd., Doncaster, in bottles, 6d. and 1s. (postage extra).

FORNICA (Cheltenham).—Ants in Hives.—1. These pests may be kept out of hives by inserting each of the hive legs in an old tin lid or vessel, which may be filled with paraffin or turpentine. 2. Syrup-feeding is only required till natural food can be had outside.

Suspected Combs.

S. E. (Kent).—Both samples are badly affected with foul brood.

W. B. (Surrey).—There is foul brood of bad type in comb sent.

BADLUCK.—See above reply but sample shows the disease to be of very old standing.

HAWTHORN (Leicester).—There are no remains of brood in any cell of comb sent for us to judge if diseased or not.

NOVICE (East Diss).—1. No trace of disease in any of samples (three) sent. 2. Brood in No. 3 is normal, and apparently healthy, but dead, of course, through being chilled.

T. HOAD (Bexhill-on-Sea).—The bit of old, black comb shows no trace of any brood—not even a sealed cell in it.

****** Some Letters, Queries and Replies, &c., are unavoidably held over till next week.***

Special Prepaid Advertisements.

Twelve words and under Sixpence: for every additional Three words or under, One Penny.

Advertisements for current issue must be received by first post on Tuesday.

WANTED, immediately, about THREE CWT. good quality genuine ENGLISH CLOVER or SAINFOIN HONEY. Also, later, quantity of New Sections ditto.—SLADEN, Ripple Court Apiary, Dover.

100 HEALTHY SWARMS WANTED. Boxes will be provided free. Quote price delivered Welwyn.—E. H. TAYLOR, Welwyn, Herts.

WILL EXCHANGE Sections, Shallow Brood-combs, or Chickens for a Natural Swarm. Liberal terms.—LEE, Decorator, Boothstown, Manchester. P 93

DRAWN-OUT SHALLOW COMBS are invaluable to induce Bees to enter supers; 4s. 6d. per set of ten. Clean and sweet.—BOCOCK, Ashley Apiaries, Newmarket. P 91

HEALTHY SWARMS.—May, 12s. 6d.; June, 10s. 6d Box 6d. Splendid honey gatherers. Inspection of my 50 stocks invited on Wednesdays. Sections, 9s. per dozen. Guaranteed safe arrival. Deposit.—P. HANSEN, Apiary, 3, Gladstone Cottages, Norwood Green, Southall, Middlesex. P 90

CHAMPION "NEVER SWARM" QUEENS, guaranteed healthy. Virgins, 2s.; Fertiles, July, 5s.—HARRIS, Wavendon, Bletchley, Bucks. P 49

EXTRACTOR FOR SALE, 8s. Takes two Standard Frames. Require larger.—BILLSON, Cranford, Kettering. P 89

BARGAIN.—Gent.'s Coventry Cycle, up to date, perfectly new; accept £5 10s.; five years' guarantee; carriage paid; approval. Particulars free.—FORGE APIARY, Wheaton Aston, Stafford. P 88

WANTED, THREE HEALTHY SWARMS (natural). Exchange ½-plate camera, three slides, lens, or sell 38s.—EVERETT, Nichols Street, Leicester. P 86

29TH YEAR.—E. WOODHAM offers Queens, Nuclei, Swarms, and Stocks of Bees as previously. Imported Italians, 7s. each.—Clavering, Newport, Essex. P 82

HARRISON WEIR'S "OUR POULTRY," two vols., bound, as new, 12s. 6d.; or offers in exchange Swarm Bees, clean drawn Standard, or Shallow Combs, Weed Foundation.—ROBSON, Wormald Green, via Leeds. P 81

WANTED, 200 SWARMS. Drawn-out Comb for Sale.—KEATLEY, Clarence Road, Fouroaks. P 80

PRIME NATURAL SWARMS this season, as usual, all from first-class Bar Frame stocks, 12s. 6d. and 15s. each. Cases to be returned. (Telegrams, Wilkins, Letcombe Regis.)—PERCY WILKINS, Letcombe Regis, Wantage. P 78

30TH YEAR.—Reliable Queens, 1905, in introducing cage, 5s.—ALSFORD, Expert, Haydon, Sherborne. P 77

RELIABLE 1905 QUEENS, laying, 4s. each.—A. BUTLER, West Villa, Scotter, Lincoln. P 75

FOR SALE, WOODEN BUILDING (in sections), 12 x 7, new last December, suitable as store room or workshop, shelves included, £6 5s. Also Four Empty Hives, nearly new, guaranteed to have contained healthy Bees; also one dozen Shallow Combs, with box, 30s.; or £7 10s. the lot.—J. ADDYMAN, Charlestown, Baildon. P 74

W.B.C. HIVES A SPECIALITY.—Send for prices and particulars.—J. THOMAS, Joinery Works, Llangennech, S. Wales. P 92

TWO EXCELLENT 1905 QUEENS, 5s. each.—"APIARY," 3, Maitland Park Road, N.W. P 72

SPECIAL OFFER.—New American Hives, ten Langstroth frames, body box of 1in. pine, dovetailed, super cover, zinc roof and floorboard, will last a lifetime, 3s. 6d. each, complete. — JAMES HILLMAN, Regent Street, Stonehouse, Glos. P 71

QUEENS (Doolittle's celebrated strain).—95 per cent. of the Bees in America are improved Italians, proof positive of their superiority over other races. Americans don't keeps Bees to look at, but for solid work. Fertiles, 5s. each, after June 10th; Virgins, 1s. 6d. each, after June 1st. First come, first served. —DAVID TAYLOR, Ilminster. P 73

STRONG NATURAL SWARMS, healthy.—May, 12s. 6d.; June, 10s. 6d.—T. BRADFORD, Expert, 3, Summer Street, Worcester. P 70

WANTED, HONEY EXTRACTOR and SCREW-TOP JARS; good condition; cheap.—MORRELL, 32, Broad Park Road, Plymouth. P 69

INCUBATOR, 60-egg size, and Foster Mother, both copper tanks in good condition; will sell for 35s., or exchange for good Bee appliances.—M. OWEN, Wernolen, Groeslon, R.S.O., Carnarvon. P 68

NATURAL SWARMS, 10s. 6d. and 12s. 6d.—R. CARTER, Chartridge Green Farm, Chesham, Bucks. P 56

QUEEN EXCLUDERS.—Four dozen Queen Excluders, plain margin all round, 4s. 6d. dozen (cost 7s. dozen). Also six sheets, 96in. x 10in., 2s. each (cost 3s. 6d.). Also two dozen plain sheets (roof zinc), 24in. square, 6s. 6d. dozen (cost 9s.). All new. No further use to owner.—G. STANBROOKE, 60, Rumford Street, Chorlton-on-Medlock, Manchester. P 57

WANTED, unlimited quantity, TILLEY'S PATENT ("Won't Leak") 2-lb SECTIONS, completed by the Bees, in quantities to suit producers, soon as ready.—M. H. TILLEY, Bee Barm, Dorchester. P 83

HEALTHY SWARMS BOOKED NOW.—May, 2s. 6d. lb.; June, 2s. lb.; Queens, June, 3s. 6d.—HEMMING BROS., Standlake, Witney. P 24

TILLEY'S PATENT ("Won't Leak") SECTIONS.—Only a limited quantity can be delivered this season unless ordered early. After June 1st prices will rise. Particulars post free.—J. T. GODWIN, Agent, Dorchester. P 84

STRONG HEALTHY NATURAL SWARMS, 12s. 6d. Skeps free. Safe delivery.—CADMAN, Codsallwood, Wolverhampton. P 64

7S. 6d. HIVES, 7s. 6d.—The Beekeeper's opportunity, standard size, with super complete, painted. Illustration sent.—OZONE APIARY, Trimingham, Norfolk. P 45

SWARMS of "YE OLD ENGLISHE BEES."—Having so many orders already booked I cannot promise others till after June 15. Prices 10s. 6d., 12s. 6d., and 15s. Packing boxes free and safe delivery.—W. WOODLEY, Beedon, Newbury.

4 STRONG HEALTHY STOCKS, in well-made hives, 25s. each.—A. COOK, "Torwood," Ford Bridge Road, Ashford, Middlesex. P 41

CHEAP.—EIGHT NEW HIVES. Must be sold, owing to removal. Stamp please for particulars.—PRITCHARD, Wainalong Road, Salisbury. P 40

QUEEN REARING.—No trouble to work; no expensive appliances; can't fail; four cages and full instructions, 2s. 6d. — MEADOWS, Syston, Leicester. P 33

NATURAL SWARMS NOW BOOKED.—May, 3s.; early June, 2s. 6d.; later, 2s. lb.; returnable box.—PRESBYTERY APIARY, Marnhull, Dorset. P 30

PRIME NATURAL SWARMS, expected end of May and early in June (no artificial swarms made in this apiary). I guarantee them natural, healthy, and also safe arrival. May, 3s.; June, till 15th, 2s. 9d.; after 15th, 2s. 6d. per lb.; 1s. allowed on all empty boxes returned carriage paid.—S. BAILEY, Itchingfield, near Horsham. P 27

SALE OR EXCHANGE, Fowls for Bees, Cook-Tammadge best laying strains. White Wyandotes, 1905 hatched, 4s. 6d. each.—SHACKLETON, Thorner, Leeds. P 25

12 STANDARD SHALLOW FRAME CRATES, with eight clean extracted combs, guaranteed healthy, 6s 6d. each.—HARRIS, Wavendon, Bletchley, Bucks. P 17

Prepaid Advertisements (*Continued.*)

ORDERS BOOKED NOW for NATURAL SWARMS of my hardy prolific strain, guaranteed healthy and safe arrival, 4 lbs., 12s. 6d.; 5 lbs., 15s.; 6 lbs., 18s. Packages to be returned. Expected early in June.—WHITING, Valley Apiaries, Hundon, Clare, Suffolk. P 23

NATURAL SWARMS IN JUNE, from strong healthy Stocks, in Bar Frame Hives, 10s. 6d. and 12s. 6d. Cash with order, or deposit.—BROWN, 30, Albany Road, Crawley, Sussex. P 14

STRONG HEALTHY SWARMS, 1905 Queen, 12s. 6d., 13s. 6d. Stocks on eight Standard Frames, 23s. 6d., with 1905 Queen. Guaranteed healthy.—W. WOODS, Normandy, Guildford. P 51

ITALIANS, first cross, best honey gatherers, good-tempered. Strong ten frame stocks, with last season's queens; guaranteed healthy; ready for supers; package free; 25s. each.—O. KNIGHT, Epney, Stonehouse, Glos.

PRIME NATURAL SWARMS, May and June, 12s. 6d. each. Boxes, 1s. Cash with order, or deposit.—G. JORDAN, Steeple Aston, Oxford. O 91

PROTECT YOUR FRUIT.—Tanned Garden Netting, only best quality supplied. Order promptly, as nets are scarce and must be dearer. 25 x 8 yds., 50 x 4, and 100 x 2 yds., 9s. each. Add ten per cent. for other sizes.—L. WREN AND SON, 139, High Street, Lowestoft. O 92

WANTED, for scientific purposes, QUEEN BEES and WORKER HORNETS? Will brother bee-keepers oblige?—HERROD, Apiary, Luton.

A PRONOUNCED SUCCESS.—The BURKITT BEE-GLOVE. With sleeves, 3s. 6d. per pair, post free. Without sleeves, 2s 6d. per pair, post free. The best, cheapest, and most satisfactory glove for bee-keepers.—EDWARD REYNOLDS, Glove Maker, Andover, Hampshire. Wholesale prices to the trade

'Prompt Despatch.'

LARGE STOCK OF BEE-KEEPING APPLIANCES ON HAND.

The Best Goods only Supplied.

STOCKS AND SWARMS A SPECIALITY.

Have you a copy of our Price List?

WHY NOT PLACE A TRIAL ORDER WITH US?

JONES BROS.

Only Address:

MONK'S ACRE APIARY, ANDOVER.

SWARMS! SWARMS!

I cannot accept more orders for swarms in May, but am open to book a few more for

JUNE, at 2s. 6d. per lb.

Boxes to be returned carriage paid.

QUEENS. QUEENS.

Tested Queens of selected qualities ready for end of May at 4s. each, posted in introducing cage. Customers are best judges. One writes:—"Pleased to say Queen supplied doing first class." Early booking recommended

DAVIDSON, Expert, Beecroft, BASINGSTOKE.

MEADHAM & SON,

HEREFORD.

Manufacturers of Up-to-date Hives and Bee Appliances.

ESTABLISHED 1876.

Illustrated Catalogue Post Free.

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THE NEW "RECORD" HIVE, 9/6

Usual price, 10/6.

FOR A SHORT TIME ONLY.

Manufactured by—

RAWSON & THOMPSON, TADCASTER, YORKS.

ROYAL COUNTIES' AGRICULTURAL SOCIETY

SHOW AT PORTSMOUTH, JUNE 12—15

One of the Largest Shows in England!

HONEY AND HIVE SCHEDULES OF—

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READ! READ!! READ!!!

"When found make a note of,"

New Catalogue. New System of Trading.

All in your favour. Your address will oblige.

HIVES IN FLAT. The most accurate. The best value. Customer writes:—"I think your way of making hives in flat deserves greatest praise."

BEE CANDY - - - - 14 lbs., 4/6.

W. R. GARNER,

Hive Factory, Dyke, Bourne.

Everything you need for Garden, Bees, and Poultry

PROMPTLY SUPPLIED BY

GEORGE ROSE,

50, GREAT CHARLOTTE ST., LIVERPOOL, &c., &c.

Send for my well-known Guinea "W.B.C." HIVE

(awarded many prizes)

Chief Depot for Bee Literature.—"Guide Book," **1/8**; "Natural History, &c.," **2/9**; Swarthmore's new books, "Increase," **1/2**; "Baby Nuclei," **2/2**; "Commercial Queen-Rearing," **2/1**; and new and very interesting books, "Bee Pranks," 7d.; "Honey Money Stories, **1 2**; "Bees as Rent Payers," **4d.**; Mrs. Comstock's "How to Keep Bees," **5/-**; Hutchinson's "Advanced Bee Culture," **5/-**; (each of these prices post-free).

104-page Illustrated Catalogue, 3d. post-free.

Machine-made Honey Jars, screw cap and wad, nominal or full lb., **14/6** gross, in 3-gross crates; send **4d.** for sample of the new glass stoppered (tight, no leaking) Honey Jars now on sale. Tip Top.

WEED FOUNDATION.—Specially Low Prices for Orders in April and May.

Excluders, **8d.**; Extractors, **15/-**, **23/-**, and **30/-**; Wax Extractors, **2/9**, **8/-**, and **10/-**; Ripeners, **8/-**, **11/-**, and **13/-**; Spring Feeders, **1/3**; Strongly made Smokers. **3/-**; Veils, **1/-**, and **1/6**; Super Clearers, **2/-**; Sections **2/6** per 100; Frames, **8/-** 100; Metal Ends, **3/4** gross; Embedders, **1/-**; Wire, **4d.**; Naphthaline, **6d.**; Naphthol Beta, **1/-**; Artificial Pollen, **6d.**

Everything Bees want, promptly sent.

Editorial, Notices, &c.

THE OUTLOOK.

The altogether beneficial change in the weather during the past few days has been in the highest degree encouraging to all whose interest lies in the direction of bee-keeping. Indeed, if—as weather-prophets assure us—"there is every reason to believe that the present warmth and sunshine will continue," we may expect to hear such a merry hum among the bees as will cheer the hearts of their owners to the full.

The opportunities for feeling the pulse, as it were, of bee-keeping which come to us as Editors, would surprise many who have, perforce, to judge from their limited circle only, while, given a week of good bee-weather, and the B.B.J. office immediately runs short of copies. In other words, we find in all directions that the number of persons taking more than a passing interest in the pursuit is rapidly increasing, and, if we are favoured with a bee-season of the good old-fashioned kind, the industry will receive an impetus the like of which has not been seen for a long time.

Correspondence.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

*** In order to facilitate reference, Correspondents, when speaking of any letter or query previously inserted, will oblige by mentioning the number of the letter as well as the page on which it appears.*

AMONG THE BEES.

"HUTCHINSONIANA."

[6317.] *A Fascinating Pursuit.*—No more ennobling pursuit exists than that of bee-keeping. It is the poetry of apiculture. It is uplifting and inspiring, health-giving and useful, fascinating and profitable. It improves the mind, trains the eye and hand, cheers the heart, and fills the pocket-book. No other rural pursuit is more safe, pleasant, and reliable.

Its Profits.—Bee-keeping, if it is not an occupation in which one can easily become wealthy, can be depended on to furnish a comfortable living, and perhaps enable a man to lay up a few thousand dollars. Fortunately, however, the professional man's happiness bears little relation to the size of his fortune; and the man with the hum of the bees over his head finds happiness deeper and sweeter than ever comes to the merchant prince, with his cares and his thousands.

More Bees.—In reply to the query, "What will best mix with bee-keeping?" I have always replied, "Some more bees." When the conditions are favourable, I am decidedly in favour of bee-keeping as a speciality, of dropping all other hampering pursuits, and turning the whole capital, time, and energies into bee-keeping.

"Scrub Bees".—Every bee-keeper with several strains, even of the same variety, knows that some are far superior to others—that there is scrub among stock bees just as there are scrub horses, cattle, sheep, and poultry. With such scrub stock the cost of hives, combs, and appliances remains the same; it is no less work to care for such stock. In proportion to its cost, no investment brings the bee-keeper greater profit than superior stock.

Nature and Art.—Some bee-keepers condemn any practice that is not "according to nature," forgetful of the fact that the whole system of modern bee-culture is largely a transgression of nature's laws. We do not keep bees, or arrange their hives so much with a view to saving them labour, as that we may get the most honey with the least labour to ourselves. Most internal fittings are probably not considered "handy" by the bees, but their use is an advantage to us.

Know Your Locality.—A bee-keeper cannot know his locality too thoroughly. Some men succeed in localities where others fail, and one reason is because their more thorough knowledge of the locality enables them to adopt methods more perfectly adapted to the peculiarities of that location. In changing the locality, even the veteran must leave behind him many of his old notions and methods, and seek advice of his new neighbours who have been successful. Above all things, know your locality.

The Best Bee.—For the production of extracted honey, the Italians are probably unexcelled, but in producing comb honey the blacks show two points of superiority. They are more willing to store their honey in the supers, at some distance from the brood, and in capping their honey they leave a small space between the honey and the capping, which gives to the comb an almost snowy whiteness. Either variety in its purity is easier to handle than a cross between them. These hybrids are irritable while being handled, but for the production of comb-honey, so far as results are concerned, there is perhaps no better bee.

Comforts and Conveniences.—Many comforts and conveniences, not absolutely essential to success, serve to render more smooth and pleasant the somewhat thorny paths of bee-keeping. They are, in one sense, the oil that makes the great apicultural machine move smoothly. Let each bee-keeper look about his apiary and see if he is not doing some of his work in an

awkward manner, which might be avoided by providing a few comforts and conveniences, most of which are comparatively inexpensive.

Starters Every Time.—An equal number of swarms were hived on full sheets of foundation and of starters only. In experiments made year after year, after weighing both surplus and brood combs at the end of the season, the evidence has been in favour of empty frames *every time*. Swarms hived on drawn comb have always shown a loss so great that it is folly to repeat.

Exit Swarming.—Natural swarming, with its uncertainties, anxieties, and vexatious losses, is destined eventually to become a thing of the past. Methods of controlling increase, preventing it altogether, or doing the work artificially, will reach such perfection that swarming will be eliminated.

A Multum in Parvo.—If bees can enjoy frequent flights, out-of-doors is the place to winter them. As I understand it, this whole matter of outdoor wintering of bees might be summed up in a few words: Populous colonies, plenty of good food, and thorough protection. Simple, isn't it? Yet there is a world of meaning wrapped up in these few words.

Work Kills, Not Age.—Labour, activity, anxiety, are wearing to mortal flesh. To live long, one must live slowly. We wish our bees to have the same degree of physical vigour in April which they possess in November. The right cluster is knit together, and the individual bees thereof only aroused to full consciousness by positive disturbance.

Size of Hive.—The question of large versus small hives is largely one of locality. In the cooler regions, where the harvests are early and short, small hives find favour, especially in comb-honey production, while the large hive is a favourite in warmer regions blessed with a long honey-flow.

"Read, Mark, and Inwardly Digest."—A thorough course of reading is the first step that can be taken by a prospective bee-keeper. One after the other he should read all the leading standard text-books. Having done this, he should subscribe for the best bee journals. Gradually work into bee-keeping, and let there be plenty of actual experience before venturing extensively on the pursuit.

Think for Yourself.—It is a mistake to have undue confidence in the leaders. Read how other men have succeeded, consider their advice, but do your own thinking.

Show, Show!—Anything that increases the consumption of honey is a benefit to the pursuit, and shows call the attention of crowds of people to the excellence and deliciousness of honey as a food, and it impresses the public with the true importance, magnitude, and complexity, of modern bee-culture.

Bread, Butter, and Honey.—To those who are getting their bread and butter by raising honey to spread upon the bread and butter of others, this book is dedicated by the author.—D. M. M., Banff.

HOME-MADE HIVES.

[6318.] Articles appearing in the B.B.J. from time to time under the above heading (and particularly that on page 204 last week) no doubt serve a useful purpose in stimulating others to try their hand at hive-making, and thus increasing the number of bee-keepers. It is within my own knowledge that there are persons who would be glad to start bee-keeping if they could afford to purchase the needful appliances. Being myself a working-man with a large family, I have perforce had to make my own hives, and have constructed them out of any material obtainable at a cheap rate, including used boxes. But I have now discarded all used boxes and old material, using nothing but sound, new wood, and I find that the extra cost (which is only trifling) is more than compensated for by the saving of time in making and the enhanced value of the hives when finished. One trained to the use of tools like your correspondent, Mr. F. J. Richards, would find no difficulty in making their own frames, but for the great majority of amateurs it would be far better to buy them. I make my hives of good, sound red deal (I should use yellow pine, but cannot procure it in this neighbourhood except in large quantities), and, like Mr. Richards, I took first prize at our annual show (Devon B.K.A.) at Tavistock in 1904, and the report appearing in the B.B.J. spoke well of my exhibits. I append quantities of boarding and price, as used by myself:—

	s.	d.
10 ft., 9 by 1	1	8
7 ft., 11 by ¾	1	2
8 ft., 1-in. matched...	0	10
8 ft., ½-in. matched...	0	6
8 ft., ¾-in. flooring...	0	8
5 ft., 2½ by 1	0	3
3 ft., 2 by 2	0	1½
Zinc	1	3
Nails	0	2
Total	6	7½

If above is of any interest to JOURNAL readers, please use it. I should often send you notes about bee-keeping, but am not sufficiently skilled in the use of the pen, and therefore do not like to worry you with my effusions.—W. C. STONE, Wellington, Somerset, May 28.

[We shall be very pleased to hear from

you whenever inclined to pen a few useful notes such as the above. Do not have any misgivings with regard to skill in "use of the pen," we will see to that so far as regards its suitability for print.—EDS.]

BEES IN BURMA.

[6319.] I hope these few notes will be of sufficient interest to find a place in your columns.

"Here in Burma, during the hottest months, everybody who can do so "flees unto the hills." I took a twelve hours' railway journey to Tourgoo, and thence a holiday jaunt into the Eastern Karen Hills. I rode about twelve or more miles through the forest on a "bike," and then, mounting an unshod Burman pony, set out to climb the four thousand feet to Thandourg. I must not try to describe the journey, but confine my remarks to bee matters. The first sign of bees that I got was a tall tree, quite straight and smooth, with bamboo pegs stuck in at intervals all the way up. I will explain this later. Arrived at Thandourg I began to explore and soon discovered a tree fairly humming with the smallest bumble-bees I had seen. They were black with a yellow band across the abdomen. I could learn little of them except that they were gathering pollen. Near by I saw the huge black-bumble-bee that supplies the Karen with an article of commerce. It is not so bulky as the English bumble-bee, but larger in size, and its hum is considerably louder. All that I saw were loaded with pollen. These bees seem to either hibernate, or, as I think more likely, migrate. About Christmas time a few begin to appear, and the number grows larger as time goes on, till, by March, as many as twelve to twenty swarms will collect in one huge flowering forest tree. They hang their combs from a branch, and these combs measure from three feet long and one foot and a half deep.

The Karens gather this honey in a really plucky manner. The trees are too big to be climbed in the ordinary way, so pegs of bamboo are driven in to form a ladder. The pegs are driven in as the man ascends, and a cool head is needed to climb one hundred and fifty feet of bare trunk on such a frail ladder.

To get the honey he must wait till night, and then up he goes with "smoker" (which is a sort of torch), basket, and rope to lower it. Having smoked the bees, he cuts away the comb piece by piece, and lowers it to the ground. Having secured his treasure, he sells it to a Burmese trader for the noble sum of Rs.5. The bees build only on two or three kinds of trees, and return to the old spot year after year.

I noted some wonderful examples of pollen distribution. One, a large mauve flower, was so curious that I made a rough sketch on a bamboo leaf. The bee entering must tread on the small flat step A, and this brings the pollen brush B down on its back with some force. There are

five stamens, and the bees get a very liberal powdering of yellow pollen.

Wishing all bee-keeping friends a prosperous season.—ERNEST HART, Mandalay, Burma, April 21 (formerly member of the Lincs B.K.A.).

[We gladly insert your interesting notes and hope to hear from you again.—EDS.]

NOTES FROM THE ISLE OF MAN.

[6320.] I herewith append a few lines on our Manx spring, from a bee-keeper's standpoint. The weather during March and April was all that could be desired—glorious sunshine every day, and during a period of five weeks we had only one shower. You can imagine how the bees would increase with plenty of early flowers in bloom, the gorse in particular yielding its yellow pollen profusely. Most of my own stocks covered ten frames by the beginning of the present month; but, alas! the weather broke — just as "Flowery May" came in—and it has rained almost during the whole month. Bee-keepers can now guess the critical condition of those forward stocks, teeming with brood and young bees, and scarcely a day fit for a bee to forage. I feel sure that a good many colonies that have not received constant attention will have been either lost through starvation or have suffered such a set-back as will take them a long time to recover from.

I had to watch my own dozen hives daily and keep on feeding. Even with this attention I almost lost one of my best colonies, as the food was being consumed more rapidly than I thought. Immature drones and others ready to fly were being turned out to die from nearly every hive,

and also young worker-brood from several. I notice that large numbers of bees from strong stocks go out for food even on dull, wet days, so eager are they to provide for their brood.

I do not remember so cold and wet a May as this, and we must hope that we shall be compensated by good weather later on and heavy crops of clover. I send name, etc., for reference, and sign — J. J. M., Laxey, Isle of Man, May 26.

BEE-KEEPING IN SOUTH AFRICA.

[6321.] With reference to the letter of your correspondent, "W. H. E.," in B.B.J. of March 8 (6232, page 94), I emphatically endorse his arguments with regard to importing foreign bees. I have been reliably informed that the South African bee-markings and size stand well when compared with the Italian. Moreover, in bee-keeping, common-sense should be allowed for, and, from this point of view, surely Mother Nature must be given credit for having produced the bee best adapted for local requirements. I consider that importation has already brought into this country enough stock diseases without any corresponding advantage for us to wish for more, our latest being rinderpest, a malignant form of cattle-mange, and tick-fever.

The following is the record of my best colony of bees (South African):—

The bees were captured, and hived in a Danz. hive, on November 9, and covered about six frames when hived. By February 29 the bees covered twenty frames, and produced ninety-four sections and 20 lb. of "chunk" honey.

As for viciousness, I think bees all the world over will at times take charge of things. I have gone through many recently-hived swarms and clipped the wings of queens, examined combs, and pushed the bees about with a naked finger, and have not been stung once or even "buzzed at" while working without gloves, my only bee-quietance consisting of a cigar. That was when handling colonies captured about ten days previously, but those of longer standing, I admit, require precautions. But, after all, it is a very human trait to put on guard a watch-dog when property has been acquired.

Apart from all that, however, South African bees can be made docile by frequent handling; but, as a set-off against that, they seem to become sluggish, and less inclined to work, so that a little desire to show fight at times, even in bees, is a good thing.

According to my experience, the best time to handle bees here is when the weather is cool (not cold), and the very worst time when it is very hot!

With regard to the horse mentioned by "W. H. E.," may not the bees have been angered by the vibrations of the horses' feet, or the "champing," in biting off the grass? I think bees are intensely sensitive to sound, and it is certain that anyone using a hoe near a hive will bring the bees out screaming "Whaffor," and cause them to hustle round generally if the bee-man is not out of their way sharp. I have noticed this even with my most docile colonies. It can hardly be the odour of the newly-turned soil that irritates the bees, because there is no trouble when it is done sixty or eighty yards away. At that distance they take little notice in their flight. Moreover, I have stood within a few yards of a hive and kept on the best of terms with the bees, but as soon as I started pulling up weeds about the hive-entrance they came "for me" pell-mell, and stung wherever they got a chance. It therefore seems clear that our bees here do not resent one's working seventy yards away. The inference is that the commotion is due to sound or vibration. Moreover, they are more vicious when the ground is damp.

With regard to the question of English versus American hives, I may state that I have only tried the latter, on the recommendation of a friend, which contained cost and simplicity. As I do not wish to sustain a commercial patriotism on that basis only, I may state that a catalogue of English hives, furnished by a local dealer, made the cost—in my case—prohibitive, or it may have been that the dealer was taking advantage of local ignorance. But it has been ever thus in South Africa. Unless a bee or even an atom of the "Mighty Atom" has imagined that he has crossed an imaginary line, he is deemed an indigenous ass. At some future date, if our editors still have any patience left to hear me, I will inflict on B.B.J. readers an article on the South African honey-bird, or bee-finder.

In conclusion, I may say that out here we read and listen to matters reported in the B.B.J., so pray listen to us who write from our "Native Heath," although we have no B.B.J., and can only say "Why not leave S.A. bees as they come to us from the hand of Nature, and forget what kind of bees are recommended by dealers or queen-breeders, and by that same token keep away foul-brood from us!—INYOSI, Zululand, Natal.

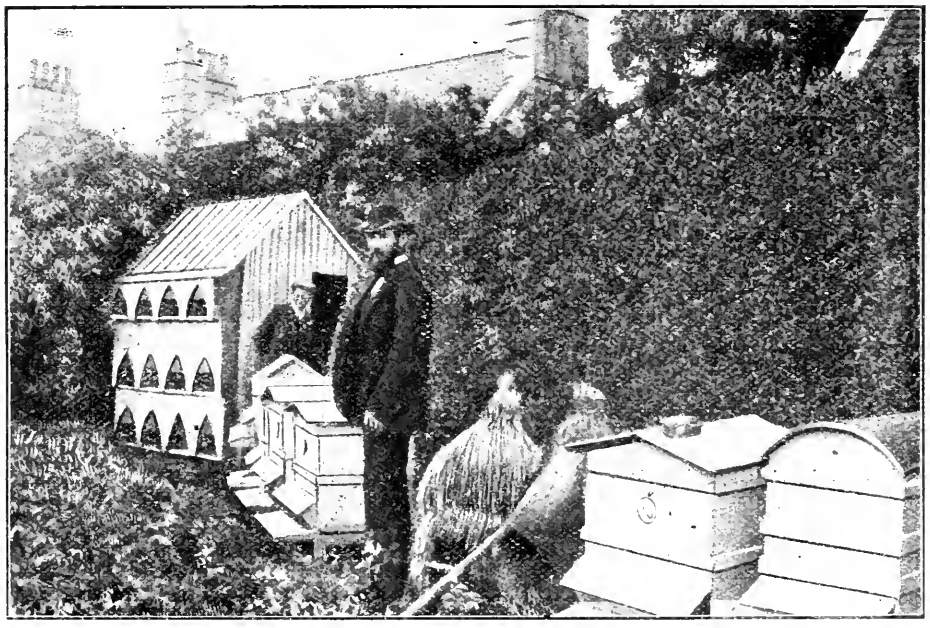
[We hope our friend will make inquiries with regard to the comparative cost of American and English hives, and get prices for the latter from dealers who are above "taking advantage of local ignorance." English hives of simple construction (as American hives are) can be had at very low prices.—EDS.]

HOMES OF THE HONEY BEE.

THE APIARIES OF OUR READERS.

We need add nothing to the full notes sent by Mr. Moir. They speak for themselves. He says:—

"It gives me much pleasure to comply with your request for a few 'notes' on my experience in bee-keeping. I first took a fancy for bees when a boy of about nine years. The blacksmith in my native parish was a bee-man of the old-fashioned skeppist type, and I often accompanied him in his rounds among the straw skeps, and at the end of the honey-season I saw the poor bees dealt with in the only way known in those days to get the honey—viz., by the sulphur-pit. However, as years went by I had to leave the place, and lost sight of the bees. In the summer of 1870, on my return journey after delivering a message to a neighbour, I came across a splendid swarm of vagrant bees in a field, and hurried home and reported the 'find' to my employer, the late W. J. Lawrence, Esq., who gave me a straw skep to hive the bees in, and liberty to place it in the garden where I worked. I was not long in hiving the bees, and they were nicely placed, and worked splendidly. In the following summer the first swarm issued, and the second swarm (or 'cast') later on, both being safely hived. At the end of 1874 I had to leave the district, give up bee-keeping, and also to sell my eleven splendid stocks in skeps. I had no chance to keep bees again until 1896, when, having a well-sheltered garden, I returned to the country and to the hobby of my younger days. I purchased a good stock of bees in a frame-hive, and, as the winter evenings came on, began to consider how I could add to my stock and improve on my methods of bee-keeping. I commenced to read the B.B.J., and got a copy of Mr. Cowan's 'Guide Book,' which is certainly the best and most practical bee-book I have yet come across. With my first modern frame hive as a model, I set about making my own. I made four the first winter, and when the season came round filled them with driven bees got from bee-keeping friends, who were very pleased to see them saved from the sulphur-pit. By careful attention the four new lots were safely wintered, and I had a splendid return of honey next year. In the winter following I made four more hives, all of which were occupied by swarms at the end of June. Without being able to boast of any big 'takes' of honey, I have been fairly successful on the whole; my best harvest from a single stock was eighty-four 1-lb. sections from a ten-frame hive, but after removing the surplus I found the brood-chamber almost empty. Since that time I always allow the bees to provide their own winter's supply if possible. When I find any shortage I feed gently, which



MR. C. P. MOIR'S APIARY, FERNBANK, ALFORD, N.B.

does not happen often. The photo sent only shows one side of my apiary, but I have nine more hives outside the range of the camera. Three years ago I added the bee-house seen at the side, which is constructed to hold twelve swarms, and I find it very handy, as one can sit inside and study the habits of the bees more closely, each hive being provided with a glass window and sliding shutter, which needs to be raised in order to see the bees at work. As seen in photo, I have a pair of skeps kept specially for swarming; in this way I have plenty of natural swarms to keep up my stock. The boy seen is my son, who is rather afraid of the bees; but I never use a veil, and very rarely get stung. My occupation is an indoor one, and I start work at four a.m. and leave off at four p.m. This gives me time to do any bee-work. I never use queen-excluder, yet I have no trouble with the queens breeding in sections.

"Before closing, I may mention a curious incident in connection with one of my best hives occupied by an Italian stock. At the end of May, 1905, I put on a rack of sections, at the same time making sure that there was plenty of bees and brood, and apparently a splendid queen. All seemed right till the end of June, when I noticed a great commotion among a multitude of bees on the alighting-board, and apparently robbing going on. I examined the hive the same evening, and there was not a bee left in it, but the sections all filled and sealed—in fact, the brood-nest contained the only empty cells in the hive. It had been in my possession since 1898, and never swarmed, but always did well in honey-gathering. I do not know why the bees deserted the hive, as they were very strong two days before. We mainly depend on the white clover in our vale, and when this is past those near the hills get the benefit of the heather when the season is good."

AMERICAN AND COLONIAL PAPERS.

EXTRACTS AND COMMENTS.

By D. M. Macdonald, Banff.

Excluder Zinc. — In summing up the evidence in five papers sent in for competition, the editor of the *Australasian Bee-keeper* says: — "Experiences differ very much. I am not in favour of a general use of honey-boards. When producing sections, I have never found a queen-excluder necessary, and have had very few instances of queens laying in sections. I think the reason why queens lay in supers is the desire of the bees for drones. I put full sheets of foundation on all sections, so there is no drone-comb built there to attract the queen. Locality and the season will at times make a difference, but here excluders are unnecessary." Most of the writers, however, have a partial leaning to the temporary use of honey-boards at times, and always when working for first-class extracted honey. This is practically the exact finding of bee-keepers in this country. Though not considering them a very serious impediment in the way of affecting the yield, I never have used excluder zinc but experimentally, and have never seen any disadvantage in working for comb-honey.

Pine Honey.—Bee-keepers located near extensive pine woods have told me that some seasons their bees gathered a dark, harsh-tasted honey from the trees. The *American Bee-keeper*, quoting from an Austrian source, has this to say on the subject: — "Spruce and pine furnished the bees with honey every day for a long period. This honey was nearly black, and unfit for the bees as winter food; so it had to be extracted and the bees fed on sugar-syrup, because tests made with the black honey had proved fatal." Curiously, the bee-keepers in this country in such locations never make a success of it, as colonies are always weak.

Spare the Bees.—It is quite true that bees will clean up dirty combs, and at a time, too, when there is no harvesting of honey. But it is a pretty well recognised fact that a bee's age is reckoned in labour units, not time units. It is, therefore, folly to age one's bees by giving them unnecessary labour, because when the profit-yielding season opens these bees die sooner than they ought." A considerable amount of hard work, work which kills, can be spared the bees frequently by a little care and forethought on the part of their keepers.

One for "W. Z. H."—This is how a writer of wide experience treats the "five visits a year" management in a late issue of the *Review*:—"I would as soon think of running a dairy on the out-yard plan; turn the cows out in the spring, milk them three or four times during the summer, then when fall comes, round them all up, and give them a good milking; seems to me as sensible as to run an apiary with four or five visits a year." It is the old question over again. Many bees and little management, or few bees well managed. The last, I think, is sure to win, unless under very exceptional circumstances. Mr. Doolittle holds this doctrine, and practices what he preaches, yet he records 114½lb. of section-honey during the last poor season from an out-apiary properly managed.

Prevention Better than Cure.—In Texas they have enlightened views regarding foul brood. An inspector has been appointed where there is no disease. Yet they are wise men in their generation. "As soon

as it is learned that bees are to be brought into that section, arrangements for having them inspected are made, and the bees will not be allowed to be brought until a certificate showing that they are in healthy condition can be obtained." In Ohio, too, they are forging ahead. "The county commissioner *shall* appoint a competent person as foul-brood inspector, clothed with the necessary authority to inspect colonies and treat the same according to the most up-to-date methods. The expense of such inspection will be paid out of the funds received from a special tax of one comb per colony. As there are 150,000 colonies in Ohio, this will give a fund of 1,500 dols. to do the work thoroughly." These figures should be instructive and aid us in our next crusade for a F.B. Bill.

Queries and Replies.

[3303.] *Swarming Vagaries.*—One of my strong stocks swarmed on May 12, about 8.20 a.m., and divided into two clusters. The bees were hived in separate skeps and left owing to my having to leave home for business. At 2.30 p.m. one lot had disappeared (although both skeps, I am told, were occupied as late as 11.45 a.m.). I "hived" the remainder, which filled about three frames. On lifting quilts of the parent hive it looked so full that evidently the other lot had returned. Next day (Sunday) and on Monday they were out again, and about a quart of bees hived in a skep, but they returned on their own account to the old hive. Then on Saturday, the 19th, they came out again, clustered, and returned on their own account, without being skepped. I was only present myself on the second occasion (Sunday, the 13th). It is a strong stock, and to all appearance perfectly healthy, and was full up with brood, though wax-moth has been in, but no sign of brood, etc., being disturbed by it. I have been only waiting for warmer temperature to examine frames and transfer to newly-painted hive. A super was given on Sunday, the 13th, but they have not gone up into it. Can you explain or suggest reason for acting thus, and the best thing to do?—H. W. B., South Woodford, N.E., May 22.

Reply.—It seems clear that the queen came off with the first swarm on the 12th inst., and if both clusters had been joined together in one hiving-skep, all would have gone on right. As it was, the queenless portion of the swarm returned to the parent hive, and, finding the latter almost as crowded as before the half-swarm had left, the bees made several attempts to swarm, but, being unaccompanied by a queen, returned. On the 19th the stock was within two days of being due to throw off its second swarm, but, as the future queen of the colony would not be ready to accompany the swarm, the bees returned without clustering.

[3304.] *Packing Bees for New Zealand.*—I thank you for your letter of 12th ult. forwarding 8d. in stamps as change for my remittance of March 20. Books are safely to hand. I have just become a regular subscriber (through my agents, Messrs. Everett and Sons) of the B.B.J. and B.K.R., and find both publications most interesting. I am leaving Ceylon shortly to reside at Christchurch (N.Z.), and therefore ask: Do you think stocks of bees, if packed by a well-known dealer, will travel such a distance from England with a moderate degree of success?—John Young, Colombo, Ceylon, May 7.

Reply.—If trouble and expense are not taken into account, stocks of bees can no doubt be packed to travel safely even so far as New Zealand with only a moderate percentage of loss. But it is far more economical and safer to take queens only, each being accompanied by a hundred or so of workers. There are several dealers in bees and appliances out there who will meet all your needs in the shape of bees and modern bee-appliances. We sent copy of "The Honey Bee" as desired at once on receiving letter dated May 8, and hope it wil reach you in time. Our journals go to New Zealand at same rate as inland.

[3305.] *A Beginner's Queries.*—I had the pleasure last week of seeing the B.B.J. for the first time. I am quite a novice at bee-keeping, and shall look to the B.B.J. for help. I became the possessor of three stocks of bees, already here when I came last August, and up to the present have contented myself with feeding with candy in March and with sugar-syrup during the last fortnight of April, besides cleaning the floor-boards of hives. I may say one stock is in skep and two in home-made hives. The maker was evidently not a genius, but I am desirous of making my own, as I do most things connected with my "hobbies." I shall, therefore, be obliged if you will advise me on the following points: 1. Where can I obtain working drawings of good hive? 2. In description of some hives I see inner brood-chamber mentioned. Does this mean an inner box that may be lifted out? 3. How are "zig-zag entrances" formed? 4. For this season would you advise natural or artificial swarming, or trying to prevent swarming? 5. If the latter, which is the better way—shallow-frames under brood-chamber, or tiering up? 6. I have just examined hives, and the bees appear to have taken possession of all frames. When

should I put on super frames?—S. J. F., Canterbury.

REPLY.—1. You will find full illustrated description — with measurements — of several hives in "The Bee-keepers' Practical Note-book," to be had from this office, price 1s. 1d., post free. 2. Reply to this also appears in above book. 3. The zig-zag entrance has fallen into disuse of late years because of disadvantages not to be overlooked. 4. For a beginner, we advise natural swarming. It is quite time to leave difficult operations till some experience has been gained. 5. The same may be said of prevention of swarming on other than the orthodox and simple plan of giving room and ventilation in advance of requirements. 6. Give surplus-chambers at once if the hives are crowded with bees as stated.

[3306.] *How to Start Bee-keeping.*—I am thinking of starting bee-keeping in a small way (only one hive at first), probably about the middle of July. I am in doubt what to commence with—a swarm or a stock—and so I ask: 1. If I have a swarm, shall I get any honey at all this season? 2. Is there a Bee-keepers' Association for Cheshire, and what benefits should I gain by joining? 3. I should like to attend some lectures or demonstrations with bees if I knew of any being given in this neighbourhood. Perhaps you could give me some information on the subject, also if there are any bee-shows about here soon? I am studying Mr. Cowan's "Guide Book," and am much interested in it. I send my name, etc., and sign myself—C. H., Sale, Cheshire.

REPLY.—1. If you can secure a good swarm by the second week in June it is quite possible to secure some surplus this season if you work for it on the lines mentioned in "Guide Book." On the other hand, a strong, healthy stock headed by a prolific queen will be much more likely to yield a large return in surplus honey if bought now. 2. The hon. sec. of the Cheshire B.K.A. is the Rev. E. Charley, Rossett Vicarage, Wrexham. 3. Refer to "Shows to Come" in this issue for date of bee and honey show at Chester, where it is probable that lectures and demonstrations in bee-tent will be given.

[3307.] *Clearing Granulated Honey from Store-combs.*—I have a few dozen supers containing frames from which the honey was omitted to be extracted last autumn, and which had become too firm for the extractor in the spring. Being anxious to preserve the combs, please say what would you advise doing under the circumstances. Thanking you in advance, I send name, etc., and sign—P. J. B., Vienna, May 22.

REPLY.—If the honey in question has become solid through granulation, the best way to get it cleared out is to spray the combs with lukewarm water in order to moisten the honey, and allow of its removal by the bees themselves. The spraying may need repeating once or twice before the cells are quite cleared out, as they should be before using again, because a few particles of granulated left in the cells will cause new honey stored in them to granulate earlier than it would otherwise do. Should no other hives be kept within a quarter-mile of your own, the frames may be exposed in the open while being cleared out.

[3308.] *Honey from Wild Bryony.*—I shall be much obliged if you will inform me through your valuable journal whether honey gathered by bees from the flowers of wild bryony (which bears poisonous berries) is likely to impair the quality of the product of my hives. I have a large quantity of the plant named growing in a wild corner of my garden, and last year I utilised it as a climber to cover an arch. I noticed that the blossoms were great favourites with bees of all kinds, and it has been suggested to me that as the berries are poisonous the honey might be so as well. I have this season started a hive in my garden, and would like to know if I should root out the plants or let them remain.—G. R. M., Chingford.

REPLY.—No, there is no such danger as you fear from the flower named. Nor is it ever included among bee-forage plants.

Bee Shows to Come.

A nominal charge of 2s. 6d. is made for notices (not exceeding 7 lines) in this column, 10 lines charged 3s. 6d., up to 15 lines 5s., which covers cost of insertion from order till date of show. Cash should accompany orders for insertion.

June 12-15, at Portsmouth.—Show of Honey, Hives, etc., in connection with the Royal Counties' Agricultural Show. For schedules, apply to E. H. Bellairs, Bransgore, Christchurch, Hants.

June 27 to 30, at Derby.—Royal Agricultural Society's Show. Bee and Honey Section under the management of the B.B.K.A. Increased prizes for B.K. Associations as arranged in divisions or groups of counties. Schedules from Edwin H. Young, Secretary, 12, Hanover-square, W. **Entries close May 29.**

July 18, at Ashby-de-la-Zouch, Leicestershire.—Show of Bees, Honey, and Appliances, in connection with Annual Flower Show. Three open and two local classes, and one L.B.K.A. Bee demonstrations. Schedules from J. H. Dunmore, Secretary, Alandale, Ashby-de-la-Zouch. **Entries Close July 16.**

July 19 and 20, at Gainsborough.—Show of Honey, Hives, and Bee Appliances in connection with the Lincs Agricultural Society. Bee Department under management of the Lincs B.K.A. Fourteen classes. Liberal money prizes and silver medals. Schedules from R. Godson, Hon. Sec., Lincs B.K.A., Tothill, Alford, Lincs. **Entries Close June 15.**

July 25 and 26, at Cardiff.—Annual Show of the Glamorgan B.K.A. in connection with that of the Cardiff and County Horticultural Society. Honey, Wax, Appliances, etc. Classes for members, novices. Five open classes, with prizes for sections and

extracted honey, 21s., 10s. 6d., 5s., in each class. Bee appliances, 30s., 15s. Entry fee for one or more of the open classes to non-members, 2s. 6d. Schedules from Wm. Richards, Hon. Secretary, The Red House, Gabalfa, Cardiff. **Entries close July 20.**

July 29, at Chester.—Cheshire B.K.A. Show in connection with the County Agricultural Society. Open classes for Hives, Observatory Hives, Sections, and Extracted Honey. Baroness Burdett Coutts' prize hive for best exhibit shown by cottager member. Seven classes for members. Schedules from T. A. Beckett, St. Werburgh Chambers, Chester. **Entries Close August 8,** or at double fees, **August 15.**

August 8 to 10, at Middlesbrough.—Show of Honey, etc., in connection with the Royal Yorkshire Agricultural Society. Schedules and form of entry from John Maughan, Secretary, Blake-street, York. **Entries close June 30.**

August 9, at Madresfield, Malvern. — Annual Show of the Worcestershire Bee-keepers' Association. Open class. Schedules from Mr. Geo. Richings, 2, Shrubbery Terrace, Worcester.

August 16, at Yetminster, Dorset. — Annual Show of the Yetminster and District B.K.A. held in a field kindly lent by Mr. Jolliffe. Four open classes, including three 1-lb. jars extracted honey, three 1-lb. sections, and cake of beeswax. Schedules from G. Leeding, Hon. Sec., Bradford Abbas, Sherborne. **Entries close August 10.**

August 30, at Montgomery.—Honey Show in connection with Horticultural Exhibition. Two open classes for six 1-lb. sections and six 1-lb. jars extracted honey. Prizes, 10s., 5s., 2s. 6d. Entry fee, 1s. each class. Schedules from Mr. W. J. Jones, Secretary, Montgomery. **Entries close August 23.**

Notices to Correspondents & Inquirers.

J. HILLMAN (Glos.).—Moist Sugar for Dry Feeding.—Your sample is probably cane-sugar of a very common kind, and worth no more than the price stated. The only cane-sugar suitable for "dry feeding" is that known as Porto Rico, which is rarely procurable in this country. The cheapest genuine cane-sugar for bee-syrup is the XX preserving, at 21s. 9d. per cwt.

CARNIOLAN (Cornwall).—Driving Bees from Hollow Tree.—Seeing that the bees enter through a small hole about 12 ft. or 14 ft. from the ground, they cannot be driven out or dislodged by "boring a hole below entrance, and injecting the fumes of burning sulphur by means of a bee-smoker." If you cannot get permission to cut down, or irretrievably damage the tree in getting at the bees, we advise leaving them alone. When driven bees can be had for a shilling or two it is not worth while troubling about removing them from hollow trees.

O. R. F. (Luton).—Poisonous Compounds Used by Gardeners and Fruit-growers.—A paper devoted to horticulture and gardening would be more qualified than ourselves to furnish you with "a full list of harmful compounds," such as might destroy bees gathering nectar from plants dusted or spread with such. But it is a danger that need not be seriously taken into account by bee-keepers except in rare cases.

Suspected Comb.

W. E. S. (Worcester).—We find no foul brood (*Bacillus alvei*) in the sealed cells of samples of comb, the general appearance of dead larvæ closely resembling the disease known in the U.S.A. as "pickled brood." This is described in "Root's A.B.C. of Bee-culture" as a disease that "comes and goes; is mildly contagious, and cannot be really considered a destructive disease," *i.e.*, the bees will usually take care of it. There is, therefore, no risk in again using hives, etc.

*** *Some Letters, Queries and Replies, &c., are unavoidably held over till next week*

Special Prepaid Advertisements.

Twelve words and under Sixpence: for every additional Three words or under, One Penny.

Advertisements for current Issue must be received by first post on Tuesday.

HEALTHY NATURAL SWARMS, 10s. 6d. and 12s. 6d. 1905 Queens Returnable boxes and safe delivery.—W. SOLE, Expert, Poplar Grove, New Malden, Surrey. Q 14

TWO EXCELLENT 1905 QUEENS, 5s. each—"APIARY," 3, Maitland Park Road, N.W. Q 13

STRONG, NATURAL, HEALTHY SWARMS, June, 10s. 6d. Boxes 6d.—T. BRADFORD, Expert, 3, Summer Street, Worcester. Q 12

QUEENS! QUEENS!! (Natives), fertile and reliable, not to be beaten for all-round work, 4s. 6d. each. Order early.—FRANK HURLSTONE, Ilminster. P 94

SELLING OFF.—Bar-frame Hive, with frames, excluder, two supers, with combs, 12s. 6d.; 1½ lbs. super, 1½ lbs. brood foundation, 4s.; Guinea Extractor, good condition, 14s. 6d.; Honey Ripeners, complete, 9s.—HOPWOOD, Newton Street, Clitheroe, Lancs. P 95

STRONG, HEALTHY, NATURAL SWARMS, 12s. 6d. Skeps free. Safe delivery.—CADMAN, Codsall Wood, Wolverhampton. P 96

THIS SEASON'S pure Oxfordshire EXTRACTED HONEY, 5½d. per lb., in large quantities.—REV. F. E. FOSTER, Swinbrook Vicarage, Burford, Oxon. P 100

FOR SALE, strong CHAPMAN HONEY PLANTS, 8d. a dozen.—DARLINGTON, Charing, Kent. Q 2

OUTDOOR CHRYSANTHEMUMS, 12 dissimilar, 2s.; Calceolarias, 9d. dozen; Dobbie's Stocks, Asters, 6d. dozen, post free. Exchange Swarms or Bee Appliances. — JOHN HETHERINGTON, 88, Main Street, Brampton, Cumberland. Q 3

TWO (good as new) MAGIC LANTERNS, one in tin case, with 18 dozen humorous and nursery tales slides, £3 10s., or would divide; approval. Strong healthy Stocks, eight frames, 23s. 6d.; Swarms, 12s. 6d., 13s. 6d. Guaranteed healthy.—W. WOODS, Normandy, Guildford. Q 4

TWENTY-SECTION RACK, fitted W.B.C. bars, and 21 sections, 1s. 6d. each.—AVERY, Deverill, Warminster. Q 5

WANTED, OBSERVATORY HIVE, with stock of Italian Bees, in good condition.—Reply, stating price, to GEORGE HILL, New Sawley, Derbyshire. Q 8

YORKSHIRE BEE-KEEPERS SUPPLY STORES.—For workmanship and good quality hives and appliances send to DIXON, Leeds. Catalogue free. Q 9

WANTED, immediately, two or three pounds QUEENLESS BEES. State price wanted.—PARK, Dempster Street, Greenock. Q 1

Prepaid Advertisements (*Continued.*)

TILLEY'S PATENT ("Won't Leak") SECTIONS.—Only a limited quantity can be delivered this season unless ordered early. After June 1st prices will rise. The 2 lb. size can be used (one or more) in super, with ordinary wood sections. Sample and particulars, post paid, 6d.—J. E. GODWIN, Agent, Dorchester. P 58

BORAGE PLANTS FOR SALE. 20 for 6d., post free.—D. VALLANCE, Dunaskin, N.B. Q 11

100 HEALTHY SWARMS WANTED. Boxes will be provided free. Quote price delivered Welwyn.—E. H. TAYLOR, Welwyn, Herts.

WILL EXCHANGE Section and Shallow Brood combs, or Chickens for a Natural Swarm. Liberal terms.—LEE, Decorator, Boothstown, Manchester. P 93

HEALTHY SWARMS.—May, 12s. 6d.; June, 10s. 6d Box 6d. Splendid honey gatherers. Inspection of my 50 stocks invited on Wednesdays. Sections, 9s. per dozen. Guaranteed safe arrival. Deposit.—P. HANSEN, Apiary, 3, Gladstone Cottages, Norwood Green, Southall, Middlesex. P 90

CHAMPION "NEVER SWARM" QUEENS, guaranteed healthy. Virgins, 2s.; Fertiles, July, 5s.—HARRIS, Wavendon, Bletchley, Bucks. P 49

BARGAIN.—Gent.'s Coventry Cycle, up to date, perfectly new; accept £5 10s.; five years' guarantee; carriage paid; approval. Particulars free.—FORGE APIARY, Wheaton Aston, Stafford. P 88

29TH YEAR.—E. WOODHAM offers Queens, Nuclei, Swarms, and Stocks of Bees as previously. Imported Italians, 7s. each.—Clavering, Newport, Essex. P 82

PRIME NATURAL SWARMS this season, as usual, all from first-class Bar Frame stocks, 12s. 6d. and 15s. each. Cases to be returned. (Telegrams, Wilkins, Letcombe Regis.)—PERCY WILKINS, Letcombe Regis, Wantage. P 99

FOR SALE, WOODEN BUILDING (in sections), 12 x 7, new last December, suitable as store room or workshop, shelves included, £6 5s. Also Four Empty Hives, nearly new, guaranteed to have contained healthy Bees; also one dozen Shallow Combs, with box, 30s.; or £7 10s. the lot.—J. ADDYMAN, Charlestown, Baildon. P 74

QUEENS (Doolittle's celebrated strain).—95 per cent. of the Bees in America are improved Italians, proof positive of their superiority over other races. Americans don't keep bees to look at, but for solid work. Fertiles, 5s. each, after June 10th; Virgins, 1s. 6d. each, after June 1st. First come, first served.—DAVID TAYLOR, Ilminster. P 73

INCUBATOR, 60-egg size, and Foster Mother, both copper tanks in good condition; will sell for 35s., or exchange for good Bee appliances.—M. OWEN, Wernolen, Groeslon, R.S.O., Carnarvon. P 68

NATURAL SWARMS, 10s. 6d. and 12s. 6d.—R. CARTER, Chartridge Green Farm, Chesham, Bucks. P 56

QUEEN EXCLUDERS.—Four dozen Queen Excluders, plain margin all round, 4s. 6d. dozen (cost 7s. dozen). Also six sheets, 96in. x 16in., 2s. each (cost 3s. 6d.). Also two dozen plain sheets (roof zinc), 24in. square, 6s. 6d. dozen (cost 9s.). All new. No further use to owner.—G. STANBROOKE, 60, Rumford Street, Chorlton-on-Medlock, Manchester. P 57

WANTED, unlimited quantity, TILLEY'S PATENT ("Won't Leak") 2-lb SECTIONS, completed by the Bees, in quantities to suit producers, soon as ready.—M. H. TILLEY, Bee Farm, Dorchester. P 97

HEALTHY SWARMS BOOKED NOW.—May, 2s. 6d. lb.; June, 2s. lb.; Queens, June, 3s. 6d.—HEMMING BROS., Standlake, Witney. P 24

CHEAP.—EIGHT NEW HIVES. Must be sold, owing to removal. Stamp please for particulars.—PRITCHARD, Wainalong Road, Salisbury. P 40

SWARMS of "YE OLD ENGLISHE BEES."—Having so many orders already booked I cannot promise others till after June 15. Prices 10s. 6d., 12s. 6d., and 15s. Packing boxes free and safe delivery.—W. WOODLEY, Beedon, Newbury.

QUEEN REARING.—No trouble to work; no expensive appliances; can't fail; four cages and full instructions, 2s. 6d. — MEADOWS, Syston, Leicester. Q 10

NATURAL SWARMS IN JUNE, from strong healthy Stocks, in Bar Frame Hives, 10s. 6d. and 12s. 6d. Cash with order, or deposit.—BROWN, 30, Albany Road, Crawley, Sussex. P 14

ITALIANS, first cross, best honey gatherers, good-tempered. Strong ten frame stocks, with last season's queens; guaranteed healthy; ready for supers; package free; 25s. each.—O. KNIGHT, Epney, Stonehouse, Glos. P 61

PRIME NATURAL SWARMS, May and June, 12s. 6d. each. Boxes, 1s. Cash with order, or deposit.—G. JORDAN, Steeple Aston, Oxford. O 91

PROTECT YOUR FRUIT.—Tanned Garden Netting, only best quality supplied. Order promptly, as nets are scarce and must be dearer. 25 x 8 yds., 50 x 4, and 100 x 2 yds., 9s. each. Add ten per cent. for other sizes.—L. WREN AND SON, 139, High Street, Lowestoft. O 92

WANTED, for scientific purposes, QUEEN BEES and WORKER HORNETS? Will brother bee-keepers oblige?—HERROD, Apiary, Luton.

A PRONOUNCED SUCCESS.—The BURKITT BEE-GLOVE. With sleeves, 3s. 6d. per pair, post free. Without sleeves, 2s 6d. per pair, post free. The best, cheapest, and most satisfactory glove for bee-keepers.—EDWARD REYNOLDS, Glove Maker, Andover, Hampshire. Wholesale prices to the trade

ROYAL COUNTIES' AGRICULTURAL SOCIETY

SHOW AT PORTSMOUTH, JUNE 12—15

One of the Largest Shows in England !

HONEY AND HIVE SCHEDULES OF—

E. H. BELLAIRS, Christchurch.

SWARMS! SWARMS!

I cannot accept more orders for swarms in May, but am open to book a few more for

JUNE, at 2s. 6d. per lb.

Boxes to be returned carriage paid.

QUEENS. QUEENS.

Tested Queens of selected qualities ready for end of May at 4s. each, posted in introducing cage. Customers are best judges. One writes:—"Pleased to say Queen supplied doing first class." Early booking recommended.

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Editorial, Notices, &c.

NORTHAMPTONSHIRE B.K.A.

ANNUAL MEETING.

The annual meeting of the Northamptonshire Bee-keepers' Association was held on May 19 in All Saints' Schools, Northampton. The Rev. J. Palliser Frend occupied the chair, and after the minutes of the last annual meeting had been read over and signed, the report and accounts for the past year were gone through. The season of 1905 was a very variable one for honey, some parts of the county producing a good crop, and in other parts only a very little was secured. The annual show, held in Kingsthorpe Hall Park, on July 20, was a very fair one. Mr. W. Herrod, F.E.S., judged the honey and wax, and awarded the silver medal of the British Bee-keepers' Association to Mr. James Adams, West Haddon; the bronze medal to Mr. Charles Wells, Oxenden; and the certificate to Mr. Charles Cox, Brampton. Mr. George Hefford, Northampton, awarded the prizes in classes for honey-cakes, etc. The accounts show the year started with a balance in hand of £8 7s. 8d., and closed with an increased balance of £10 12s. 7d., and no liabilities. This was considered satisfactory, and duly passed. The chairman proposed thanks to the retiring president and officials, which were accorded. The election of officers for the ensuing year then took place, Mr. James Manfield being re-elected president. The association having received permission to hold the annual show in Abington Park, it was decided to fix the date, Thursday, August 9. The schedule of prizes was revised, and it was decided to accept the cottager's hive, value 15s., kindly offered by the Baroness Burdett-Coutts for competition amongst cottage members of the association.

The meeting closed with the usual vote of thanks.—(*Communicated.*)

CAMBS. AND ISLE OF ELY B.K.A.

ANNUAL MEETING.

The second annual meeting since its re-organisation was held at Cambridge on Saturday, May 12, the Chairman, Mr. C. J. Mapey, presiding over a numerous attendance of members, including Miss A. M. Smith, Mrs. L. White, Dr. Sidney Wood, Messrs. C. Dunn-Gardner, F. R. Ford, W. Fison, R. Brown, A. S. Shrubbs, J. Short, G. Hills, E. Bailey, C. Peacock, Allen Sharp, and others.

The report and balance-sheet showed an increased membership of 65 during the past year, the total now being 154. There was an adverse balance of £8 9s. 3d. The report and balance-sheet were adopted. The experts, in reporting results of their visits to members, mentioned the sadly-neglected condition in which they found a majority of the apiaries, foul brood being present in many hives. In some cases total destruction was resorted to, and in others remedial measures were adopted. On the other hand, some of the apiaries visited were stated to be a credit to the industry, and in some districts the disease seemed non-existent.

The various exhibitions of honey held during the year had been most successful. Two candidates had gained the third-class certificate of the B.B.K.A. during the year, and 517 hives had been insured under the scheme of the parent association. Fortunately, however, no claim had been made.

The following officers were appointed for the ensuing year:—

President, A. Peckover, Esq., Lord-Lieutenant; Chairman, Mr. C. J. Mapey; Executive Committee, Dr. O. Wood, Rev. H. Hensman, Messrs. W. R. Billing, R. Brown, F. R. Ford, J. Short, and W. Moore; Hon. Treasurer, L. Tebbutt, C.C; Hon. Secretary, G. E. Rogers; Auditors, A. S. Shrubbs and J. Short; Hon. Experts, R. Brown and C. N. White; Visiting Experts, G. Hills and Allen Sharp.

A very successful meeting concluded with the usual votes of thanks.—(*Communicated.*)

PRESENTATION

TO AN EMPLOYEE OF MESSRS. ABBOTT BROS.

Mr. W. E. Strickland was on Wednesday last presented with a gold watch and testimonial in the following words: "We, the undersigned, wishing to convey to you some expressions of our regard and friendship, ask your acceptance of the accompanying gold watch, on which is engraved a record of your long and valued service with Abbott Bros." We understand that Mr. Strickland is the third employee who has completed twenty-five years' service with the above firm.

Correspondence.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

*Communications relating to the literary department, reports of Associations, Shows, Meetings, Echoes, Queries, Books for Review, &c., must be addressed only to "*THE EDITORS of the 'British Bee Journal,' 8, *Henrietta-street, Covent Garden, London, W.C." All business Communications relating to advertisements, &c., must be addressed to "*THE MANAGER, 'British Bee Journal' *Office, 8, Henrietta-street, Covent Garden, London, W.C."*

NOTES BY THE WAY.

[6522.] The month of June has come in cold and dull, though ere this appears in print we may be sweltering in summer heat,

and our apiaries booming with the busy hum of the bees accompanied by the seductive scent of the first honey flow's ingathering.

Swarming is very late in this part, only two or three have issued so far, and these in a sheltered valley near woods. I write on June 4, and have had only one swarm, although the bees have been fed liberally for some time. As a matter of fact, there has been no good bee-days to help in expanding brood-nests, and fill the top edge of brood-combs with new honey. We have, however, had a good steady soaking rain since my last notes were written, and it has wonderfully changed the appearance of grass crops. All we now want is plenty of sunshine to start the bees at work on the fast-extending fields of forage. Sainfoin will be blooming in a few days, and this is one of our chief honey-producing plants. At present we have the hawthorn in bloom, and a good breadth of trefoil or hop-clover, together with a few patches of trifolium grown for green fodder, so that this particular bee-forage lasts some time as only a small portion is cut each day.

When putting on supers if the outside comb in brood-nest is full of honey (sealed or unsealed), I find it a good plan to bruise the cappings of that particular comb and insert it in the centre of the brood-nest; by so doing the honey will be transferred above, or the bees will start comb-building in the supers very quickly. When using shallow-combs, do not forget the excluder-zinc, or the queen will probably take possession of the combs and fill them with brood.

The condition of the brood-nest is the best guide to the bee-keeper how to proceed in giving supers. If the hive contains only nine frames, and these are all well filled with capped brood, and not boiling over with adult bees, super on the nine frames and let well alone; but if there are more bees than brood add a tenth frame of comb, if such is on hand; or give a full sheet of wired foundation; but be sure to make all super compartments cosy and warm by wraps of some soft material.

Bee Flowers.—I noticed a little patch of Limnanthes Douglassi the other day nearly covered with bees. This shows it must be a good bee-plant. It is a hardy annual, and seed sown late in the season makes an early forage for the following spring. Now is a good time to propagate arabis by offsets. A small "set" planted now will form a good clump for next year's early bloom. Extra racks of sections should be given where required—by those happy bee-men located in early districts—when the bees have began sealing over the sections or combs in the first rack. A carbolised cloth is the best thing to use when putting the racks on. Just prise up the first rack, place the second one beside the hive on a stool or empty case, give a puff of smoke when prising up the rack, then take your cloth and as you lift off the rack allow the cloth to drop on top of brood-nest, lower the full rack down towards the spread-out cloth and the fumes will drive any bees up among the sections; then place it on top of the second empty rack, remove the cloth and place both racks over the brood-combs. By so doing not a single bee will escape or attempt to sting, and the job is done so neatly and quickly that there is practically no waste of time by the bees being disturbed in their work. — W. Woodley, Beedon, Newbury.

A QUEEN-REARING INCIDENT.

[6323.] Perhaps you can inform me whether the following curious circumstance is unique or of occasional occurrence:—A short while ago I gave to a colony (in the queen-rearing compartment) six artificial cups containing royal jelly and newly-hatched eggs taken from an Italian queen whose progeny are well known to me. Four of these cups were "accepted," and I can bear witness that they contained fine larvæ before the cells were capped; not only so, but when capped they were as fine queen-cells as one could wish for.

One was placed in a queenless colony belonging to a neighbour, and the history of this I have not yet followed up. The remaining three were placed in separate nuclei of my own. On Monday last two of these were hatched out, and free amongst the bees were seen fine, well-developed virgin queens. The remaining cell had not hatched yesterday (Tuesday). I removed this cell and uncapped it in the presence of my wife. The cell contained a fully-developed and mature (but dead) worker bee and a quantity of dried royal jelly. This worker was a black bee, the queen-rearing colony also being blacks.

It appears to me that a young black bee of the queen-rearing colony became accidentally imprisoned in the queen-cell during capping time.

I can vouch for the following facts:—1. The larva introduced was a pure Italian. 2. The larva was accepted, and before the cell had been capped over was perfectly natural. 3. The queen-cell was perfect and entire when given to the nucleus (of blacks). 4. The cell was perfect and entire yesterday when removed, the point being thinned down, as is usual in a ripe cell. 5. On opening it contained an ordinary worker, black (defunct), and dried-up royal jelly.

6. The bee and queen-cell entire I have preserved, and can post you if necessary.

Four weeks ago I wrote in answer to advertisements in your paper to Cyprus and Germany respectively enclosing money for Cyprian and Carniolan queens to be delivered in May. I have so far received no acknowledgment or queen from either source.—A. E. E., Romford, May 30.

[We have no personal experience of a similar incident to the above during queen-rearing operations, though, if our memory serves, an instance has been recorded of a worker-bee being accidentally imprisoned in a queen-cell. We will be glad to have the views of others among our readers who may have anything to communicate bearing on the interesting occurrence dealt with above. 2. It is more than probable that the delay in delivery of queens ordered has been caused by adverse weather prevailing in so many parts of the world during the past few weeks.—EDS.]

NOTES FROM CORNWALL.

PICKLED BROOD AND "BALLING" QUEENS.

[6324.] I have at present a case of pickled brood in my apiary. At first I thought it was foul brood, but the ropy matter is absent and the dead grubs are stiff, mostly unsealed. It has evidently been there about four or five weeks. I failed to discover it, owing to bad weather preventing examination. I also lost four colonies owing to the bees "balling" their queens, after an early examination in spring. A bee-keeper has perforce to choose between the risk of non-detection of disease or the loss of queens by "balling." On the whole it is best perhaps not to examine too soon.

As regards the pickled brood, I sprayed same with phenyle solution, and also sprinkled formalin on the floor-board, but an examination three days later showed that the bees had not cleared out the dead grubs. I am at a loss to understand why they have not done so. It is directly contrary to what has been reported by others. I have again put formalin on the floor-board and will report results later. If no cure is effected I intend to put bees on new combs. The complaint is evidently not "chilled brood," nor is it foul brood or black brood, though it might develop into either.

The next colony to that referred to had one or two such diseased grubs, but the bees bring out the dead without combs being even sprayed. I have noticed such before. Some colonies never allow the disease to make any progress in the least. I wonder if the greater immunity to disease in the case of some stocks may not be simply due to having the sanitary faculty more highly developed? Happily my other stocks are free from all disease. Mr. Williams, our county expert, deserves great praise. He is a most active man, and has stamped out many cases of disease this spring. He has also the knack of persuading bee-keepers to do as he wishes them. If all experts were hard workers we should make some progress. He acts on commonsense lines, and is discouraging the extension of bee-keeping amongst unsuitable persons. The greatest enemy of the craft that exists is the man who does not understand the subject, but yet will "keep bees." We shall soon be more free from disease in Cornwall if the bee-keepers visited will do as Mr. Williams directs them. I know from experience that some men would never be any use as bee-keepers, but in the past enough care has not been taken to discourage such recruits; the result has been disastrous. — W. J. FARMER, Redruth, June 3.

BEES IN MID-CHESHIRE.

[6325.] Stocks are rapidly getting into good form, stimulated by the hawthorn, and sycamore, while some colonies are surprisingly good, notwithstanding the past months' ungenial weather. The bee-keeper who has fed his stocks well during May will, I believe, have a good return for his outlay. I am taking notes as to the best methods of taking advantage of our short honey-flow in Cheshire, to quote a number of differences in opinions which are to be met with among our leading apiarists. I am also observing the condition of the various races of bees as regards foul brood, and at the end of my tour will send you some notes.—E. PIDDUCK, Expert on Tour in Cheshire.

CAPPINGS OF COMB.

By L. S. C. Illey, Yorks.

An apology is perhaps not needed for this column, which will introduce itself as a small corner of unofficial comment upon the lately current issue of the B.B.J., and contain "cappings," which, while not so valuable as the solid combs of store from which they are cut, may yet repay the trouble of "running down."

"The Outlook" (p. 211).—It is hardly surprising that the heat of summer should be felt in Covent Garden; but perhaps one reason for the increased circulation is the fact that our JOURNAL is now on sale at all the bookstalls, so that he who runs by train may read.

"Hutchinsoniana" (p. 211). — Isn't "W. Z." readable? Wrong or right, he seems to know his own mind, and go

directly to the point. Glad to see that he has something to say for the black bee. There is an opening for some one to breed this bee on modern lines, when it would, I think, be found that it had a less tendency than some other breeds to became what he descriptively terms "scrub stock."

"Home-made Hives" (p. 212).—I like that 1-inch stuff, presumably for the body-box. Used boxes are all right for lightness; but how many days a week do you lift the hive about, and how many days a week do you want it to be warm?

"Bees in Burma" (p. 213).—One would like to know how the natives drill the trees for the hollow bamboo pegs.

"Bees in S. Africa" (p. 214).—That is an interesting point about the vibrations of the ground, which would, of course, reach the hive. But, any way, horses stand to get stung from one point or other! They have a knack of tossing restlessly at an inquisitive bee. Think it's a gadfly, no doubt.

"Pine Honey" (p. 216) reads like honey-dew. I have some "pine honey" to dispose of. Lovely stuff! Guaranteed to entirely satisfy! "Spare the Bees."—If not the bees, who *is* to do the work? The bee-keeper? Why should *he* die young? "One for 'W. Z. H.'"—If I remember rightly, Doolittle's out-yard *was* run on the half-dozen visit system, so that his instancing will hurt the critic more than help him. Boomerang him, in fact.

Queries and Replies.

[3309.] *Faulty Foundation.*—You have at various times during the past 18 years given me useful advice and replies to inquiries, and I again beg the favour of a reply. I have sent by separate post a comb cut from one of my frames, and also a piece of foundation, such as I am using, and I should be glad if you would say whether you think the foundation is made from pure beeswax, or is it an inferior beeswax. I have put a quantity of it into my hives and find much of it stretches and sags, and the bees are making drone cells similar to those in the comb sent, so much so that some of the combs scarcely have a worker cell left. I wire all my frames, and have never had such trouble during the 18 years I have been a bee-keeper, running over 100 stocks. It is a serious loss to me, as my bees in many hives are breeding whole frames of worthless drones. Of course, I am getting the frames out where I find them, but you know it is no joke where so many stocks are concerned. The foundation came from one of the oldest firms in the trade, and I have never had cause to complain before. It runs eight-sheet frames to the lb., which should be stout enough for wired frames. I will send you the firm's name if you wish.—W. J. H. C.

Reply.—There is no doubt that the wax used in foundation sent is altogether too soft for the purpose, and will undoubtedly cause loss and disappointment to those who use it. Please send on name as promised.

[3310.] *Doubling and Storifying.*—I shall be glad of your advice on the following:—I am trying "doubling" with one of my hives, and added a box of shallow-frames over the brood-nest without any queen-excluder between. I find to-day the bees are drawing out the combs nicely, but are building brace-comb between the top-bars of brood-chamber and the shallow-frames, making the latter very difficult to get out. 1. What should I do to remedy this fault? It is the first time I have used either shallow-frames or tried doubling. 2. I do not quite understand about leaving ¼in. space at bottom of dummies. Are the bees not liable to get to the wrong side of the dummy and build comb where it is not wanted? I enclose card and sign—E. C. S., Leeds, May 24.

Reply.—1. The shallow-frame box must on no account be used without a queen-excluder between it and body-box, so there is no remedy except cutting out brace-combs and setting on an excluder. 2. Bees only build combs during the time when the full number of frames are in the hive, and that being so you will find there is no room for comb-building between the dummy and hive sides.

[3311.] *Stock Destroyed in Spring.*—I am sending you specimens of comb from three or four frames removed from a hive last week, thinking it might be affected with foul brood. I may say a strange thing happened to this stock. It had been strong all the winter, but about three weeks ago I noticed several dead bees outside the hive and several in a helpless condition. Examining the interior I found the entrance and bottom of the hive completely blocked with dead and dying bees. The brood in middle frames seemed to have hatched out all at once and dropped on the floor, more than three-parts of which were still living but unable to fly. I could not see a particle of honey, and so I suppose it was a case of starvation. My other stocks had been gathering from the arabis, and many combs were glistening with new honey, but cold weather set in and this

(*Continued on page* 226.)

HOMES OF THE HONEY BEE.

THE APIARIES OF OUR READERS.

The little apiary illustrated below shows another reader—among many—in his bee-garden who makes his own hives from used boxes, and, putting aside the one in the foreground, very well they look. The "notes" Mr. Skippen sends read as follows:—

"My interest in bees was first aroused while at our local flower show in 1902. In the autumn of that year I purchased a stock in a frame-hive, not knowing anything about bees, and in the following spring they were found to be queenless, and died out. But this did not put a stop to the fascinating hobby. My ambition was to become not only a bee-keeper, but a bee-master, and my first failure did not daunt me. I next bought four stocks, and purchased a copy of Mr. Cowan's "Guide Book," and began to take your valuable journal, without which I could never have gained my present success. My stocks now only number eight, having sold several, but my present intention is to build up my apiary to a fair size this year. The first difficult job I tackled was to take a swarm which had been located in a disused chimney for eight years, and had never sent out a swarm during the whole time. The tenant of the house was afraid to walk about in his garden, so I started on the task, with two bee-keepers watching me from a distance, who could not pluck up courage to face the ordeal. The bees had built their combs to a slate laid on the top of the chimney. I got badly stung, but managed to secure 60 lb. of beautiful light clover honey for my trouble, and I estimated that 30 lb. or 40 lb. fell down the chimney out of reach, and was lost. I make all my own hives from disused boxes, and also drive condemned bees belonging to cottagers to save them from the sulphur-pit; these I unite with my own, and thus have my stocks strong when put up for winter.

"Our honey seasons have been very discouraging here for the past two years owing to the excessive drought. Our main source here is white clover and limes. It is, on the whole a good district, but rather dry.

MR. A. G. SKIPPEN'S APIARY, SPRINGFIELD, ESSEX.

However, I cannot complain, for last year I secured sixty well-filled sections of fine quality from my best stock. I have never had foul brood, and hope I never shall. In conclusion, I should like to offer a word of advice to beginners: Do not imagine, because our brother bee-keepers across the water secure enormous takes of surplus that you will get them here, because there is so much difference between their climate and ours. I lived in America myself for seven years, and know what I speak of. Do not experiment, but keep to the steady, beaten track, and you will be on the road to success.

"I conclude by wishing all bee keepers a successful season in 1906."

(*Continued from page* 224)

big population had nothing to sustain them. I at once transferred them to a new hive and have since removed all the combs containing brood to check the disease if it is here.—J. P., Polperro, May 25.

REPLY.—The samples of comb were in very foul condition when received, and were put out of sight without delay in consequence. From particulars given it would appear to be a case of death from hunger, while the entrance becoming blocked with dead bees prevented ingress or exit. The sealed brood is quite black, and cell-cappings wet and sunken, as when a stock has been asphyxiated through over-heating. There is no sign of foul brood, therefore we must attribute it either to famine or to the last-named cause. Hive-entrances should be cleared at regular intervals during the early spring.

[3312.] *A Beginner's Queries.*—Do you know of any book dealing with honey — that is, advising concerning the best methods of keeping it, and the changes which take place when ripening, etc.? Last year I stored some honey, and find this spring that it has gone hard and white. Why is this, and how could it have been avoided? With regard to bees themselves, I have kept a few stocks in frame-hives for some time, but have never taken up the art seriously, with the consequence that I have always been unsuccessful. Now, however, I intend taking it up more thoroughly, and with that object have begun to take in the B.B.J. I find that one of my colonies is very weak, only one or two bees flying out at intervals. I have not opened it up to examine the frames, but can see from just raising the quilt that there is only about one seam of bees. There is, however, a fair amount of sealed honey. Do you think the hive is queenless, and should I make a full examination of the combs? Is it yet time to put supers on strong hives, and will supering infallibly prevent swarming? Let me have the "Guide Book" and pamphlet (order herein) at once, as I wish to get my hives right.—I send name, etc., for reference, and sign QUERIST, Wolverhampton.

LATER.—Since writing the above I have examined the weak hive mentioned, and find very few bees, on three frames at most, and these not very well covered. There are no eggs, apparently, and I could not find the queen. On some of the frames, however, there are patches, in the centres, of a few square inches, of what appear to be drone-brood that is, the cells project considerably above the comb-level, and are in most cases sealed over, but in one or two there are large and apparently healthy larvæ. If this is a case of queenlessness, where do the larvæ come from, and, if not, how is it there is no worker larvæ? The number of drone-cells is, I presume, too great to admit of the possibility of a fertile worker. I may mention that the hive has been weak for some time. I send name, etc., for reference, and sign — QUERIST, Wolverhampton.

REPLY.—In future please enumerate queries sent for reply in this column. By so doing it renders matters more clear on both sides. For the rest, we may say all good honey becomes "hard and white" after keeping for some time, but, by storing it in a proper place, granulation is retarded, and honey is considered more suitable for table use if kept clear and liquid. Having now taken up bee-keeping "more thoroughly" and procured a "Guide Book," you will find in the latter full directions on all general matters connected with bees and bee-keeping, and the B.B.J. query and reply column will, we hope, meet any special difficulties which may arise in your work, such as dealing with the weak colony mentioned. With regard to this we may say (1) the stock is either queenless or headed by an unmated queen, or (2) there is a fertile worker in the hive. This is clear from the fact of drone-brood being found in worker cells. The "Guide Book" tells all about these matters, so consult the Index on all points, and form your course of action accordingly. The stock in question is apparently valueless, and the bees hardly worth saving.

[3313.] *A County B.K.A. for Somerset.*—1. Very many thanks for your answers through present issue of your valuable JOURNAL. I have destroyed the whole of the combs from the hive of which sample of comb was submitted, and as the hive is not a valuable one, should I destroy this also? 2. Can you say if the County Association for Somerset is formed yet? If so, I shall be pleased to become a member.—P. B. R., Frome.

REPLY.—1. By all means destroy the hive, and so avoid future risk. 2. We understand that good progress has been made in the direction referred to, and hope to have particulars shortly for publication

[3314.] *Dealing with Bees in "Stewarton" Hives.*—I have just received a stock of bees in a "Stewarton" hive, which seems from every point of view a healthy and strong lot. I shall be pleased to learn through your paper—1. What steps are required in order to build up a strong hive to be in time for the clover harvest (which is in full swing here about the first week in July. 2. Also what steps I require to take to prevent swarming, as I only wish to have the

one hive, time not allowing me to have more this year. From all appearance the stock in question must have a vigorous queen (which I learn was reared last year), as I can see from inspection at the front and back windows there are abundance of bees. In this district we have many spring flowers, together with tree and fruit-blossom, but I am not anxious for the honey from such sources, preferring to have the bees strong in time for the clover harvest. I have several spare Stewarton boxes for use when wanted. I send name and sign —HEXAGON, Alinton Mearns, N.B.

REPLY.—1. If bees are now, as stated, healthy and strong, and not short of food, they will need no attention just now beyond setting one of the spare boxes on as a super to prevent swarming. You do not say if the stock occupies more than one box at the present time, but we suppose they do not, if bees are seen crowding at front and back windows. The Stewarton system has almost fallen out of use in this country, but it affords an excellent chance of preventing swarms as room can be given either above or below, as may be desirable.

[3315.] *Queenless Bees.*—Being a constant reader of the B.B.J., I beg to ask your advice in the following case:—One of our colonies of bees has, I think, become queenless. Since March last brood and dead drones have been occasionally cast out. On April 17 the hive had its spring cleaning, and on examining the combs they were found to contain drone-brood only in worker-cells. The hive was again examined a week ago, and there was no trace of worker-brood. I failed to find the queen, but drones are flying freely from the hive, and the workers are carrying in pollen, but only half-heartedly compared with my other stocks. It seems certain there is a laying worker in the hive. The bees cover eight frames. — EMANUEL DAVIES, Bethseda, N. Wales.

REPLY.—We should unite the bees to the hive next to the queenless lot, as they would not be likely to raise a queen from brood if given from another hive, now that drone-rearing has been in full swing for some time.

[3316.] *Samples of Comb for Inspection.*—I enclose a sample of comb from one of my hives, and shall be glad if you will say if it contains foul brood. I can only find one comb with cells like this, and have taken it away, although full of brood (healthy most of it) as a precaution. There are only a few cells scattered about the comb like those in the enclosed pieces. The comb is perfectly new, and this is the first brood raised in it. The stock is strong, having nine frames containing brood on both sides, and seems ready for supering. I intended writing a few "notes" for insertion in the B.B.J., as is my usual practice, but this discovery has rather damped my spirits, for I have spent a lot of time and money on my hobby. 2. I am hoping to see Mr. Carr at the "Royal" Show this month, as I have read the JOURNAL now for four years, and have a great desire to see the Editors of our JOURNAL in the flesh. Name, etc., enclosed for reference, and sign—HAWTHORN, Derby, May 30.

REPLY.—Judging from the two small bits of comb sent, it seems a case of chilled brood only, but your tiny sample was unsuitable for inspection, as comb contained only three or four dead larvæ in all. Samples should not be crushed or have the cells probed at all, but sent in tin box with letter outside the box. 2. It is more than probable that the individual you name will be visible at the Derby Show (and pleased to see you) if inquired for at the secretary's office.

[3317.] *Dealing with Queenless Bees.* — I have a queenless stock, and upon looking for guidance in dealing with the motherless bees I think the making of an artificial swarm is best. But I cannot understand the instructions on page 106 of "Guide Book" (last paragraph). The mention of "other stock" I take to mean the stock with a queen, which latter has to be placed on a sheet for the reception of the queenless lot. If that reading is correct, where does the "swarm" come in, as there is no increase of stocks by that plan? If, however, the "other stock" means the queenless lot, then the "other bees" referred to further on must be a stock hive with a queen, and it is, therefore, the latter that have to be shaken off in front of the hive. In this case I take it to be necessary to see that the queen enters the hive that was queenless, or else give them a frame of brood and eggs wherewith they might raise a queen? Reply in next issue will oblige—S. E., Ness, Neston.

REPLY.—Page 106 of "Guide Book" is part of the chapter on "Uniting," and does not deal with making artificial swarms at all, but merely with a means of utilising the queenless bees by joining them to another colony. It is seldom worth while to give a comb containing eggs and brood to a colony that has been for some time queenless. If, therefore, no brood has been reared in the hive this year, the bees will make no attempt to raise queens from eggs given now.

[3318.] *The "W.B.C." Hive.*—Will you please inform me in next issue of B.B.J. if the "runners" of floor of "W.B.C." hive are intended to rest on the stand, or do they drop over each side and so help to

prevent lateral displacement of hive(the floor itself resting on stand)?—Z. Y., Rochford, Essex, May 28.

REPLY.—The runners drop over the loose stand, in order to keep all firm and secure when in position.

Bee Shows to Come.

A nominal charge of 2s. 6d. is made for notices (not exceeding 7 lines) in this column, 10 lines charged 3s. 6d., up to 15 lines 5s., which covers cost of insertion from order till date of show. Cash should accompany orders for insertion.

June 12-15, at Portsmouth.—Show of Honey, Hives, etc., in connection with the Royal Counties' Agricultural Show. For schedules, apply to E. H. Bellairs, Bransgore, Christchurch, Hants.

June 27 to 30, at Derby.—Royal Agricultural Society's Show. Bee and Honey Section under the management of the B.B.K.A.

July 18, at Ashby-de-la-Zouch, Leicestershire.—Show of Bees, Honey, and Appliances, in connection with Annual Flower Show. Three open and two local classes, and one L.B.K.A. Bee demonstrations. Schedules from J. H. Dunmore, Secretary, Alandale, Ashby-de-la-Zouch. **Entries Close July 16.**

July 19 and 20, at Gainsborough.—Show of Honey, Hives, and Bee Appliances in connection with the Lincs Agricultural Society. Bee Department under management of the Lincs B.K.A. Fourteen classes. Liberal money prizes and silver medals. Schedules from R. Godson, Hon. Sec., Lincs B.K.A., Tothill, Alford, Lincs. **Entries Close June 15.**

July 25 and 26, at Cardiff.—Annual Show of the Glamorgan B.K.A. in connection with that of the Cardiff and County Horticultural Society. Honey, Wax, Appliances, etc. Classes for members, novices. Five open classes, with prizes for sections and Bee appliances, 30s., 15s. Entry fee for one or more of the open classes to non-members, 2s. 6d. Schedules from Wm. Richards, Hon. Secretary, The Red House, Gabalfa, Cardiff. **Entries close July 20.**

July 29, at Chester.—Cheshire B.K.A. Show in connection with the County Agricultural Society. Open classes for Hives, Observatory Hives, Sections, and Extracted Honey. Baroness Burdett Coutts' prize hive for best exhibit shown by cottager member. Seven classes for members. Schedules from T. A. Beckett, St. Werburgh Chambers, Chester. **Entries Close August 8,** or at double fees, **August 15.**

August 8 to 10, at Middlesbrough.—Show of Honey, etc., in connection with the Royal Yorkshire Agricultural Society. Schedules and form of entry from John Maughan, Secretary, Blake street, York. **Entries close June 30.**

August 9, at Madresfield, Malvern. — Annual Show of the Worcestershire Bee-keepers' Association. Open class. Schedules from Mr. Geo. Richings, 2, Shrubbery Terrace, Worcester.

August 16, at Yetminster, Dorset. — Annual Show of the Yetminster and District B.K.A. held in a field kindly lent by Mr. Jolliffe. Four open classes, including three 1 lb. jars extracted honey, three 1 lb. sections, and cake of beeswax. Schedules from G. Leeding, Hon. Sec., Bradford Abbas, Sherborne. **Entries close August 10.**

August 30, at Montgomery.—Honey Show in connection with Horticultural Exhibition. Two open classes for six 1-lb. sections and six 1 lb. jars extracted honey, 21s., 10s. 6d., 5s., in each class. extracted honey. Prizes, 10s., 5s., 2s. 6d. Entry fee, 1s. each class. Schedules from Mr. W. J. Jones, Secretary, Montgomery. **Entries close August 23.**

WEATHER REPORT.

WESTBOURNE, SUSSEX,
May, 1906.

Rainfall, 2·50 in.	Minimum on grass, 29° on 1st and 2nd.
Heaviest fall, ·60 in. on 26th.	Frosty nights, 2.
Rain fell on 14 days.	Mean maximum, 58.
Above average, ·65 in.	Mean minimum, 42·8.
Sunshine, 168·8 hours.	Mean temperature, 50·4.
Brightest day, 14th, 13·5 hours.	Below average, 0·7.
Sunless days, 4.	Maximum barometer, 30·2 on 5th.
Below average, 71·3 hours.	Minimum barometer, 29·50 on 17th.
Maximum temperature, 74° on 13th.	
Minimum temperature, 31° on 2nd.	

L. B. BIRKETT.

MAY RAINFALL.

Total fall, 2·38 inches.
Heaviest fall, ·44 inches on 3rd.
Rain fell on nineteen days.

W. HEAD, Brilley, Herefordshire

Notices to Correspondents & Inquirers

*** Mr. E. Pidduck, Expert to the Cheshire B.K.A., Sunnyside, Alsager, writes:—"If your correspondent, C. H., Sale, Cheshire, will send me his address, I will be very pleased to call on him when visiting Sale, as I shall be shortly."

L. B-W.—Formalin for Curing Foul Brood.—Numerous reports from B.B.J. readers who have tried formalin as a remedy have appeared in our pages from time to time, as have also articles on the subject from various American and Continental papers. The particular method you mention is taken from such sources as we have named. It does not seem, however, to have found much permanent favour among practical bee-keepers.

S. H. (Lancashire).—Profit from Bee-keeping and Hive-making.—If located in a suitable district it ought not to be very difficult to earn so modest an income as 16s. to 20s. per week. The essentials for making even a small income from bees are, first, some natural aptitude for the craft; second, to get into a suitable district for honey-production; and third, combining, honey-selling, with a bee-appliance trade. For the rest it depends on the bee-man himself whether his income is large or small.

R. (Castle Cary).—Swarms from Infected Hives.—1. If the stock is only slightly diseased, and bees are hatching out so well that a swarm issues, it will be safe to hive the swarm after being kept in the hiving-skep for thirty-six hours. 2. Three weeks later we should drive the bees from parent hive and treat them as

before ; then burn the combs and frames of the parent colony, and disinfect the hive before returning the driven bees to it.

C. D. G. (Fordham).—Microscopic Study of Foul Brood Germs.—1. It would be well for you to read the series of articles by Mr. H. W. Brice which appeared in B.B.J., Vol. 27. In these papers will be found full details—and illustrations—of the apparatus required in microscopic work connected with investigations and cultures connected with foul brood germs. 2. A 1-12 in. objective is needed.

J. E. (Cambs.).—Wax-extracting.—If old combs are put into a canvas bag and weighted down on a board placed in a kitchen boiler, the bulk of the wax will rise to the surface as water heats and may be skimmed off surface into cold water, or it may be lifted off in a solid cake after cooling if preferred. The dross, or refuse, left in bag should be burnt, and bag refilled as often as needed.

E. S. (Weston).—Queen-bee Cast Out Dead. The queen was evidently old and worn out, the ovaries being apparently exhausted.

J. H. (Trowbridge).—Bees Unable to Fly. —Is is more than probable that the trouble mentioned will cease now that the weather is warmer. If not, write us again.

T. M. H. (Buxton).—Joining County Associations.—The hon. secretary of the Derbyshire B.K.A. is Mr. R. H. Coltman, 49, Station Street, Burton-on-Trent, who will doubtless supply all the information with regard to membership.

W. S. (Malden). — Buying Swarms.— Beyond advising you to have a natural swarm in preference to an artificial one, we cannot, in fairness, recommend one advertiser to the disadvantage of others. Consult our advertisement columns, which contain names, etc., of many reliable men, who supply swarms at very reasonable prices.

Gradus (Leamington).—Insect Nomenclature.—The insects sent are, as supposed, the Mason bee. They are interesting to the entomologist, but of no practical use to the bee-keeper, so that trouble taken in "digging them up" will be wasted.

Sussex Downs (Brighton).—Use of Queen Excluders.—The "advice" you quote was unfortunately given through a printer's error, and was corrected soon after it appeared. The word "never" should have been "always," so that the line should read, "We always use excluder zincs below shallow frames." We are extremely sorry that you have been misled through the mistake, especially as it has been our invariable rule in these columns to advise the use of excluders in working with shallow frames for extracting.

J. C. T. (Tunstall).—Selecting Queens.— We advise you to try the new strain advised by the queen-breeder named, as being excellent honey-gatherers.

A. B. (St. Bees).—Queen Cast out of Hive. —The queen sent is doubtless the mother-bee of the stock, and the bees have for some reason deposed her. There are sure to be some drones about for fertilising the young queen hatched on the 1st inst.

Q. W. W. (Warrington).—Untimely manipulations.—We fear the queen has been damaged during the manipulations carried out on May 18. It not infrequently happens that queens are killed or damaged by their owners, or cast out by the bees themselves after hives have been opened for the purpose of examining the frames in spring or early summer. There is no disease about the queen—as suposed.

C. S. S. (Weymouth).—Immature Drones Cast Out.—There is no cause for alarm in drones being cast from strong stocks when a sudden change for the worst occurs in weather conditions. A frosty night will bring about a turning out in this way, and it usually does more good than harm.

Suspected Combs.

Beginner (Gateshead).—There are slight signs of incipient foul brood in comb sent, but the bulk of dead brood in cells are chilled only. We should on no account use contents of combs as bee-food.

G. Tween (Great Easter).—Comb sent has never been bred in at all ; the substance in cells is simply mouldy pollen.

A. R. B. (Ross-shire).—Sample shows a bad case of foul brood.

W. J. W. (Ryde).—There is nothing worse in comb sent than pollen and honey. The loss of your two hives is therefore due to some other cause than disease. With regard to the heavy losses experienced by neighbouring bee-keepers—i.e., "eight out of nine," by one, twenty-two colonies by another, and seventeen by a third," we should like to have further particulars and small samples of comb sent, taken from hives left. If it is foul brood we can give an opinion, but of the so-called new disease we have no experience of it.

Hive (Rotherham).—Comb is affected with foul brood, and if hive is old we should burn it, along with combs and frames.

G. W. A. (Carlisle).—There is no foul brood in comb sent.

R. (Burwash).—The stock from which sample is taken is no doubt affected with

foul brood, but there is no reason why the other two stocks should become diseased if care is taken. We fear your handling of diseased combs, as mentioned, may carry infection to the other hives, and would rather destroy the stock than run the risk of losing the two healthy colonies. Dropping carbolic acid in diseased cells will not do much in curing.

A. B. (Olney).—Comb sent shows no trace of disease, cells contain only hard, mildewed pollen.

Special Prepaid Advertisements.

Twelve words and under Sixpence: for every additional Three words or under, One Penny.

Advertisements for current issue must be received by first post on Tuesday.

BRICE'S QUEENS. — Safe delivery guaranteed, in introducing cage, with full instructions, 5s. 6d. —BRICE, Brigstock Road, Thornton Heath.

SIX STRONG SWARMS from healthy skeps, packed free on rail, 10s. 6d. each. — ARCHER, 64, Kingston Road, Oxford.

8 GOOD CLEAN SKEPS FOR SALE, 10d. each.—J. HULBERT, Heckington, Lincs. Q 23

SPLENDID FERTILE DARK QUEENS, laying, 4s.—A. J. BUTLER, F.R.H.S., West Villa, Scotter, Lincoln. Q 22

SWARMS FROM BAR-FRAME STOCKS, 10s. and 12s. Cases to be returned. — H. MAY, Kingston, Wallingford. Q 21

STRONG, HEALTHY NATURAL SWARMS, 12s. 6d. Skeps free. Safe delivery.—CADMAN, Codsall Wood, Wolverhampton. Q 20

DOUBLE-WALLED MATING BOXES, painted, drawn-out combs, screens, feeding bottles, used successfully, 1s. 6d. each.—HORN, Bedale, Yorks. Q 19

AMERICAN ASTERS, tall branching, large flowers, strong plants, 6d. dozen. Few Swarms Bees, 10s. 6d., 12s. 6d.—F. D. HILLS, Apiary, Alton, Hants. Q 18

QUEENS OF 1905.—Can spare of few, of good quality, at 4s. each.—C. LODGE, High Easter, Chelmsford. Q 16

WANTED, TWO SWARMS OF BEES, in exchange, Phonograph and Records; in excellent condition.—R. DART, Two Mile Ash, Horsham. Q 24

SELLING OFF.—Bar-frame Hive, with frames, excluder, two supers, with combs, 12s. 6d.; 1½ lbs. super, 1½ lbs. brood foundation, 4s.; Guinea Extractor, good condition, 14s. 6d.! Honey Ripeners, complete, 9s.—HOPWOOD, Newton Street, Clitheroe, Lancs. P 95

THIS SEASON'S pure Oxfordshire EXTRACTED HONEY, 5½d. per lb., in large quantities.—REV. F. E. FOSTER, Swinbrook Vicarage, Burford, Oxon. P 100

TWO (good as new) MAGIC LANTERNS, one in tin case, with 18 dozen humorous and nursery tales slides, £3 10s., or would divide; approval. Strong healthy Stocks, eight frames, 23s. 6d.; Swarms, 12s. 6d., 13s. 6d. Guaranteed healthy.—W. WOODS, Normandy, Guildford. Q 4

100 HEALTHY SWARMS WANTED. Boxes will be provided free. Quote price delivered Welwyn.—E. H. TAYLOR, Welwyn, Herts.

WANTED, OBSERVATORY HIVE, with stock of Italian Bees, in good condition.—Reply, stating price, to GEORGE HILL, New Sawley, Derbyshire. Q 8

HEALTHY SWARMS.—May, 12s. 6d.; June, 10s. 6d Box 6d. Splendid honey gatherers. Inspection of my 50 stocks invited on Wednesdays. Sections, 9s. per dozen. Guaranteed safe arrival. Deposit.—P. HANSEN, Apiary, 3, Gladstone Cottages, Norwood Green, Southall, Middlesex. P 90

BARGAIN.—Gent.'s Coventry Cycle, up to date, perfectly new; accept £5 10s.; five years' guarantee; carriage paid; approval. Particulars free. —FORGE APIARY, Wheaton Aston, Stafford. P 88

29TH YEAR.—E. WOODHAM offers Queens, Nuclei, Swarms, and Stocks of Bees as previously. Imported Italians, 7s. each.—Clavering, Newport, Essex. P 82

PRIME NATURAL SWARMS FOR SALE, this season, as usual, 12s. 6d. and 15s. each; cases to be returned. Please note change of address (telegrams, Wilkins, Letcombe Regis).—PERCY WILKINS, Letcombe Regis, Wantage. P 4

QUEENS (Doolittle celebrated strain of Improved Italians).—A customer writes: "The four Virgins I had from you last year all mated within three days of receipt of same. They are my strongest stocks this season. I supered them a week ago, and they are filling up fast. They are the best workers I ever had." Virgins, 1s. 6d.; Fertiles (after June 10), 5s. Safe delivery guaranteed. First come, first served.—DAVID TAYLOR, Ilminster.

NATURAL SWARMS, 10s. 6d. and 12s. 6d.—R. CARTER, Chartridge Green Farm, Chesham, Bucks. P 56

SWARMS of "YE OLD ENGLISHE BEES."—Having so many orders already booked I cannot promise others till after June 15. Prices 10s. 6d., 12s. 6d., and 15s. Packing boxes free and safe delivery.—W. WOODLEY, Beedon, Newbury.

QUEEN REARING.—No trouble to work; no expensive appliances; can't fail; four cages and full instructions, 2s. 6d. — MEADOWS, Syston, Leicester. Q 10

NATURAL SWARMS IN JUNE, from strong healthy Stocks, in Bar Frame Hives, 10s. 6d. and 12s. 6d. Cash with order, or deposit.—BROWN, 30, Albany Road, Crawley, Sussex. P 14

ITALIANS, first cross, best honey gatherers, good-tempered. Strong ten frame stocks, with last season's queens; guaranteed healthy; ready for supers; package free; 25s. each.—O. KNIGHT, Epney, Stonehouse, Glos. P 61

PRIME NATURAL SWARMS, May and June, 12s. 6d. each. Boxes, 1s. Cash with order, or deposit.—G. JORDAN, Steeple Aston, Oxford. O 91

PROTECT YOUR FRUIT.—Tanned Garden Netting, only best quality supplied. Order promptly, as nets are scarce and must be dearer. 25 x 8 yds., 50 x 4, and 100 x 2 yds., 9s. each. Add ten per cent. for other sizes.—L. WREN AND SON, 139, High Street, Lowestoft. O 92

WANTED, for scientific purposes, QUEEN BEES and WORKER HORNETS? Will brother beekeepers oblige?—HERROD, Apiary, Luton.

A PRONOUNCED SUCCESS.—The BURKITT BEE-GLOVE. With sleeves, 3s. 6d. per pair, post free. Without sleeves, 2s 6d. per pair, post free. The best, cheapest, and most satisfactory glove for beekeepers.—EDWARD REYNOLDS, Glove Maker, Andover, Hampshire. Wholesale prices to the trade

SWARMS! SWARMS!

I am open to book a few more for

JUNE, at 2s. 6d. per lb.

Boxes to be returned carriage paid.

QUEENS. QUEENS.

Tested Queens of selected qualities ready for end of May at 4s. each, posted in introducing cage. Customers are best judges One writes:—"Pleased to say Queen supplied doing first class." Early booking recommended.

DAVIDSON, Expert, Beecroft, BASINGSTOKE.

Editorial, Notices, &c.

FOUL BROOD SAMPLES.

PACKING FOR POST.

We are at present undergoing such an unreasonable amount of trouble and disagreeable work in diagnosing cases of suspected foul brood that we must really make a protest against the extreme carelessness of some bee-keepers who send samples in such a condition as to be totally unfit for handling or inspection.

Our complaint is, we are glad to say, not against the many, but the comparative few, who seem to have no idea of neatness or even of cleanliness in making up samples for post. Readers should bear in mind that an editorial desk in a London office is not a bee-man's workshop or extracting house, and that an editor does not work with his sleeves rolled up and a pail of water by his side. To put the matter courteously but plainly, we ask readers to consider those who are earnestly desirous of helping them, and endeavour to make the task of examining foul-broody combs (never a pleasant one) as little disagreeable as possible by adopting the following precautions:—1. Do not send more than about four square inches of comb, and where possible let there be a few cells containing remains of dead larvæ. 2. Pack the sample in a tin box or some receptacle that will not crush in post. 3. Cut away all comb containing liquid honey, unless sent in a watertight package. 4. Do not probe capped cells or those containing unsealed larvæ. 5. Never put letters inside the box containing comb, but wrap them on the outside, under paper cover.

If the above conditions are observed we shall always be pleased to render help in diagnosing cases of suspected disease; otherwise we shall be compelled to have samples destroyed without any attempt to examine them.

Correspondence.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

AMONG THE BEES.

A CHAT ABOUT SECTIONS.—PART I.

[6326] There is always an "A B C" division in our ranks, because every successive season see a large accretion to our numbers. In this article I will endeavour to cater to their wants. From the outset the question of the best section to use crops up, and on the settlement of this point depends to a considerable extent the degree of success to be attained, because, on the manner in which surplus is put on the market hangs the question of a ready sale, a good price, and ultimately the profit derived, underlying which lies the settlement of the ever-increasing problem—Do bees pay?

Three styles of sections only need be named, but of each there is an infinite variety; even naming them would lead to confusion, so I make a limited selection. Of the $4\frac{1}{4}$ by $4\frac{1}{4}$ we have the two-bee-way, the four-bee-way, and the no-bee-way. Of these I prefer the first, for several reasons, which need not be recorded at present. Of these we have the general sizes—$1\frac{7}{8}$ in., 1 15-16 in., and 2 in.—1 19-20 in., however, I think, would be the best, as they would contain one pound of honey every time. I hear of the 2-in. containing rather more, but if we deduct one ounce for wood I am confident every hundred would weigh little, if any, over 100 lb. Of the other style of $4\frac{1}{4}$ in. by $1\frac{1}{2}$ in., a $1\frac{3}{8}$ in. plain, worked with fence or tin-spaced separators, all that need be said is that they have not caught on in this country, although they are asked for "once in a while." Yet another kind is heard of occasionally—the tall section, of rather indefinite height, breadth, and thickness, but supposed to be an improvement by some æsthetic-minded individuals.

Selecting, then, the "Standard" section as our standard to start from, we find several sub-divisions or varieties. There is the V-cut top, the three-side split, and the halved section. Then we have two or three sides grooved, and, finally, the wood left unsplit. When preferred, these last show best when the section is completed; but I use the V-cut top for handiness of fixing, and I would counsel all beginners to select it from the start.

In preparing, then, fold the section to assume the square, split side up. Push the under side of split half home in the corresponding dove-tailing. Insert sheet of foundation, press both half-tops into position, and you will find the wax sheet firm as in a vice. Owing, however, to the slant of split, it is generally standing out at an angle, unless the process has taken place on a block, but a slight pressure of the forefinger, if the sheet is of the right consistency, brings it to the perpendicular. Sections should at once be placed in position in the rack singly, split side up.

Foundation.—This should be thin and light, running something like thirty-two sheets to the pound, and the wax should be of the finest and purest. Each sheet can be halved, and these again cut in two, the

pound thus numbering 128 sheets, filling six racks. Handle with clean fingers. Lay half a dozen sheets on the bench, cutting them with a keen knife. If fresh from the factory, they are soft and pliable, and fit for handling, but if they have been carried over from a former season they may be dry and brittle. In this case they can be gently softened before a fire, or dipped into warm water, when they will be as good as the new.

Racks or Crates are generally made to take three sections in a row across, and seven of these rows fill each receptacle, making twenty-one sections in each. It is always advisable to bring pressure to bear on the sections after they are placed, to run them up tight, with the double object of preventing the finished article being daubed with propolis, and to secure that they are at a uniform distance apart to insure even sealing, and that every completed section shall contain one pound of honey. Dividers of tin or wood, with beeways cut out, or plain—I think it matters not which—should separate each row, so that six are required for each rack. These secure even sealing and a smooth surface, which, later on, will aid packing when we are marketing our produce.

A sufficient number of sections should be got ready early in the season in anticipation of requirements. These should be kept clean and sweet in a safe place. No date can be given for placing these on hives, as seasons differ so much, and generally each colony differs from its neighbour in signs of readiness to utilise this additional space. When bees are showing fairly numerous on the outside of outer combs, and when the upper rows of cells begin to show a white edging of new wax along the margin of the cells, put your sections on the hive, for too early is rather better than too late. In the evening carry your supers out near the hives, laying them down conveniently near. Remove roof and coverings all but top quilt. Catch rack in right hand, seize corner of cover with left; quickly pull it off, throwing it aside. This leaves the left hand ready to grasp the rack, which, with a smart, gliding motion, can be placed in position over frames before a bee realises that its domicile has been dealt with. Return quilt and other coverings, wrapping up rack very warmly. The novice should give a puff or two of smoke over tops of frames before placing on sections to keep bees in command, or a control-cloth may be placed on with the same movement which displaces the quilt. Certify beforehand that your hive is perfectly level, as on this depends largely the finish and beauty of your surplus honey.

Your eyes should be busy all the time, and should have flashed on your inner consciousness the state of the brood-nest, the number of bees in the colony, and the state of preparedness they may be in for commencing operations in supers. Generally, in a week or ten days, with a flow on, a second rack should be placed on the hive if bees are well forward with the first. Most bee-keepers believe in raising No. 1 and placing No. 2 below it resting on the brood-frames, and so with No. 3; but for some years I have laid the second and subsequent ones above, a little before the bees really require room for storing, as I hold that this additional space saves thoughts of and preparations for swarming. No rule can be laid down when successive racks should be given, or how long they should remain on the hive, but I consider honey ripens when in charge of the bees better than anywhere else, and I therefore leave them a considerable time, shifting all when nearly completed atop of the others. Taking off one of these receptacles involves more than placing them on, as you are robbing the bees of their hard-won stores, and they generally resent this. So you had better beguile them, and have all off before they realise that you have made any predatory incursion on their domain. The practice of having all finished racks above when completed aids this, as generally very few bees are left in them when taken off at the right time. When this is done judiciously bees are unaware of the fact that they are being deprived of honey.

Racks are best of the simplest construction; but it adds to the interest of the beginner if glass or celluloid is let in to the back and front to allow of observation of the bees. This also aids the bee-keeper in diagnosing when they are ready for a further enlargement of the super area, and it proves a source of interest to friends who wish to see how bees store their honey.—D. M. M., Banff.

(To be continued.)

USING COMB-FOUNDATION.

STARTERS OR FULL SHEETS?

[6327] I notice on page 212, B.B.J. of May 31, that "D. M. M." reports his swarms to have done better on starters only than on full sheets of comb-foundation! This seems astounding, and I should like to see it corroborated by some other large bee-keeper, because, if it is correct, we may as well leave off the use of brood-foundation.

I called recently on a bee-keeper who had lately changed his farm. He was milking a cow on my arrival. This he turned over to an assistant, and he would insist on first drawing me a glass of perry (from a store of 4,000 gallons), which sparkled like champagne, and tasted nearly as good;

and then he took me round his farm to show me the lovely views. We saw the towers of Gloucester on one side and the church spires of Cheltenham on the other, with Tewkesbury in the far distance. His house, which was beautifully situated, with orchards on one side and grass fields on the other, in which were large oaks, hundreds of years old, had formerly been inhabited by monks, and was called Abbotswood. It was crowded with furniture; the good wife showed me some old china and curious pictures, and said that she could take in boarders. So if this meets the eye of any B.B.J. reader desirous of a charming rural retreat for a few weeks' holiday in an old-fashioned farmhouse, I shall be pleased to furnish other information.

The "Gaffer"—as his men called him—was a real good specimen of the fine old jolly-looking, straightforward English farmer. But I have often noticed that bee-keepers are generally real good fellows, kind, and hospitable.

In this they resemble good, hard-riding fox hunters.

It has been a late, cold spring for bees, and I hear from skeppists of a great many losses through spring dwindling. I often wonder why so much fuss is made about the prevention of swarming! It seems to me that unless bees are swarmed naturally or re-queened artificially they will gradually die out, because, if left to themselves to re-queen, they often do it at unseasonable times. Indeed, I think it is the safest plan to re-queen every year, or an apiary may easily lose 25 per cent. of its stocks in a cold spring from dwindling, notwithstanding an allowance of 25 lb. to 30 lb. stores per hive. If a stock will persist in swarming, and no increase is desired, what easier than to kill the queen and return the swarm? As this nearly always takes place during the principal honey-flow, the stoppage of eggs and brood affects the surplus gathered very little, if any. Dysentery and spring dwindling seem almost as great drawbacks to success in bee-keeping as foul brood. The former evils can only be avoided, in my opinion, by a young queen and 30 lb. of natural stores, because autumn stimulation with an old queen does not seem to produce a sufficient supply of young bees to make up for spring losses—at least, that is my experience. I am often told by bee-keepers that they prefer straw skeps to frame-hives, because their bees winter better and swarm earlier out of skeps. Of course they do, for the simple reason that an ordinary straw skep has only a cubic capacity equal to about five standard frames, so that if anyone chooses to summer his bees on not more than five or six frames, he can have as early a swarm as a skeppist. But I would much prefer a six-pound swarm on June 10 out of a ten-frame hive to a three pound swarm on May 10 from a skep. I send name, etc., and sign—AMATEUR, Cheltenham, June 11.

VAGRANT BEES IN LONDON.

SWARMS AND HONEY OF 1906.

[6328.] I think your readers may be interested to know how fully the bees kept in London and suburbs take their place in the world of apiculture. I heard of a swarm in a Southern suburb on May 5, and in the same month saw a number of vagrant swarms in and round London. In the third week of May a stock of bees, kept in a fashionable part of the West End, swarmed, and caused some excitement by clustering on a branch overhanging the street. Then, with regard to honey-gathering, Messrs. Lee, of Highbury, had a sammple of this season's extracted honey submitted to them on May 16, which had been gathered by bees kept in a South-eastern suburb. The source from which this honey was obtained was unmistakable, the flavour of almond being very pronounced, and it had been undoubtedly gathered during the interval of warm weather in April. I saw a rack of finished 1-lb. sections on a hive in a Western suburb in the last week of May; not only so, but I met a bee-keeper from a North-eastern suburb who had some finished 1-lb. sections at the end of the month.

With reference to other branches of bee-keeping, I may add that of a number of young queen-bees reared in London during the month of May. These queens were duly mated, and the first was laying on June 1. To understand that it is possible June. To understand what it is possible for bees to do in London, weather per- of the very promising appearance of the lime trees at the present time.—W. LOVEDAY, June 11.

NOTES FROM CORNWALL.

PICKLED BROOD.

[6329] The additional spraying referred to in my last "notes" (6324, p. 223) not having led to the removal of the seemingly "chilled" or pickled brood, I have put the bees on new combs. I did not adopt the starvation and confinement plan after driving, but put them in a temporary hive, giving them food and liberty. After three days I transferred them to their permanent home. This plan is, I think, better than starving and confining, as the bees are much more energetic than after being confined, while the germs of disease are just as effectively cleared out—perhaps more so

—than by the other plan, nothing being voided on the confined bees.

I have since examined a friend's hive and found in it some apparently chilled brood, as in mine, and also foul brood just recently broken out, but very slight, as in my own case. I have observed "chilled" brood before in such cases, and am led to conclude that it is a case of foul brood killing the almost completely developed larva, which does not go liquid as in the case of less-developed larvæ, or I incline to this opinion because of having found the same in hives so strong that chilled brood seems impossible; not only so, but it shows next to healthy grubs of apparently similar age.

It would be interesting to have the views of others on the following questions: 1. Is there real chilled brood and pickled brood which is undistinguishable in appearance from same? 2. Is this so-called "pickled brood" a stage of foul brood? I am sorry now that I did not send some on to you for microscopic examination. 3. Why did the bees not bring out this stiff dead brood after two sprayings at intervals of three days between each, besides having formalin spread on the floor-board? Believing, as I do, that there is a reason for everything, I like to know it if I can.

Everything connected with bees is to me a never-failing source of interest, and "age does not wither nor custom stale its infinite variety," even though ill-luck sometimes pays an unwelcome visit.

Mr. Williams, our county expert, says that perchloride of mercury in a saturated solution painted over affected hives, etc., completely kills all foul brood germs for ever.—W. J. Farmer, Redruth, June 9.

[We would gladly confirm Mr. Williams's statement, but it is within our personal knowledge that he is wrong in his conclusions. Moreover, our own experience is supported by the most eminent scientists of the day. Perchloride of mercury is very useful in its way, and we have used it with advantage in bee-operations, but it stops short of destroying the spores of foul brood.—Eds.]

"A QUEEN-REARING INCIDENT."

[6329] Referring to the letter under the above heading (6323, p. 222), I may say it is, no doubt, an incident of much interest to bee-keepers. The only thing which our friend at Romford omits is to say if the bee imprisoned was found in the cell head-foremost, or was the head at the capped end? In the first instance, it is possible that there had been some accident to the queen larva, and that, in consequence, the damaged grub had been pulled out by the bees. Assuming this to be so, it is possible that while one bee has been greedily sipping at the "Royal" jelly, the laggard has accidentally become imprisoned.

On the other hand, if the head was found at the capped end of the cell, I should say that the imago queen has by some accident either died or become chilled. It is not unusual to find queens reared from pure Italian mothers vary much in colour, some being quite light, while others are very dark. I had a queen hatched out in my apiary only fourteen days ago which was no larger than a worker, and would no doubt have been taken for one by many who are not accustomed to queen-rearing, etc. Needless to say that I immediately killed her. Perhaps our friend will give us a few lines about the position of that bee's head.—L. Bowman, June 7.

[6330] I think it probable that the cell "A. E. E." refers to (on page 222) had duly hatched and the queen left the cell, and that the worker bee, having entered afterwards, had been sealed in by the workers outside. The fact that the cell contained dried-up "Royal" jelly shows that a queen had gone through the whole of its stages and hatched out in due course. I find that in the event of a cell being shaken so as to cause the larva to drop away from the "Royal" jelly, what is left does not become "dried up" and translucent, as in the case of a cell from which a queen has hatched out normally. When I first started queen-rearing I was much puzzled at finding a worker in a cell which apparently had not hatched. Seeing the cell seemingly unhatched I did not expect or look for the queen, until one day I saw the queen by chance, at the same time noticing that the cell was still capped over. I therefore examined that cell thoroughly, and found that the end was carefully and neatly sealed over again, and when pressure was applied between finger and thumb the cap opened up, showing where the cocoon had been bitten through by the emerging queen. I think this is the explanation of the "incident" referred to; and if "A. E. E," still has the queen-cell he can put it to the test referred to above.—D. G. Taylor, Ilminster, June 8.

[6331] I have just read a copy of your journal to-day a letter signed "A. E. E., Romford" (page 222), in which mention is made of your correspondent having found a worker bee in a queen-cell, and, as you ask any reader of your valuable paper if they have ever come across the same thing, I write to tell you that yesterday, June 7, in looking through one of my hives a neighbour found a queen-cell, and on opening it disclosed a fully-developed worker bee im-

prisoned in it. We concluded the bee had entered the cell, and had accidentally been sealed up. I see also, on page 224 of same issue, a letter complaining of "faulty foundation." I may say that in two of my hives in which I used foundation the combs are nearly all filled with drone-cells, and the hives nearly full of drones in consequence. With regard to this latter trouble, I have been told that I stimulated my bees too late into the spring, and left no room for the queen to lay worker eggs, so the foundation in my case *may* not be to blame; it may be my bad management. I got the foundation from a good firm. Can you explain it? I send name, etc., for reference, and sign—E. M. M., Cae Guyh, St. Asaph, June 8.

WORKER BEES IN QUEEN-CELLS.

[6332] Some years ago, when keeping bees in greater numbers than at present, I had several cases in my apiary where queen-cells were found sealed over, with dead worker bees in them. It apeared to me that this curious fact was caused by a worker bee entering the "Royal" cell directly the queen emerged, and while the intruder was inside the cell the cap was closed over it again by the old worker bees. I once found on opening a hive directly after a second swarm had issued, a worker bee in a queen-cell alive, and buzzing aloud, trying to get out, but could not do so till I released it. I have also found "Royal" cells empty (except for "Royal" jelly) with the cap closed.—J. R. T., Stamford, June 11.

MORE WORKERS IN QUEEN-CELLS.

[6333] Referring to the letter on page 222 of last issue, I write to say that on opening one of my hives this morning I observed what appeared to be a ripe queen-cell, and, thinking to release the queen, I removed the cap of the cell, but instead of finding a queen there was a dead worker bee and some "Royal" jelly only. Thinking readers would be interested in the above, you might give it a place in the B.B.J.—A. W. G., Huyton, June 11.

SAVING THE SWARM.

[6334] As a reader of your valuable B.B.J., from which I receive much useful information, I send photos of swarm that issued from one of my hives on June 3. The bees clustered right in the centre of a quick-hedge, from whence it was impossible to get the bees without cutting away all the branches. But, being anxious not to lose the swarm, my father and myself set about what we thought was an almost impossible task—viz., to get the bees out without so disturbing them as to cause the swarm to take wing and be lost. It took us fully three-quarters of an hour to get all the little twigs cut away, and we had to stop work and let the bees settle down again two or three times when they attempted to take wing so that they should not take flight. Having got the branch clear on which they had clustered, we procured a sharp saw and cut the branch off without disturbing them, and brought them out on to the field, where the swarm was safely secured in a box and finally got into a frame-hive in the evening, and the bees are now hard at work and doing well, and will, I hope, amply repay us for the trouble taken.

I think our experience will be useful to others who might be disposed to let bees go, rather than exercise a little patience in working quietly over a delicate job such as ours was, for it is quite certain that any rough handling would have caused the swarm to decamp, and be lost to its rightful owners.—C. W. K., Earl's Colne, Essex, June 11.

Queries and Replies.

[3319] *Transferring Bees—An Unwished-for Swarm.*—I had a swarm to-day which came from a frame-hive on which was placed a stock of bees in a skep, the idea being to let the bees transfer themselves to the frames fitted with full sheets of foundation prepared for them to work in below. The skep was put on a month ago, but there was only two combs partly drawn out in the hive below. I therefore ask: 1. Can you say what was the reason of the bees swarming? I returned the swarm to the frame-hive after putting a queen-excluder between the skep and frames. I also removed two capped queen-cells from the skep before replacing it above the top-bars of frame-hive. 2. Am I right in so doing? I saw two other queen-cells (not capped over) in the skep, in each of which was a larva, which I presume was an embryo queen, and these I left in the hive. 3. If the bees swarm again what will be the best thing for me to do? Your reply will much oblige.—H. F. W., Bury St. Edmunds, June 11.

Reply.—1. We can only suppose that the frame-hive was not made warm and cosy enough to tempt the queen below, as this should have occurred, seeing that the bees had begun work on the foundation. 2. Yes, if it is certain that the queen is now below the excluder, but not otherwise. 3. Return them again after cutting out all queen-cells, if there are any.

[3320] *Non-use of Excluders — Spoiled Sections.*—I have two stocks of bees in frame-hives, and some time ago I placed a rack of sections on each. On examining them this week I found in one rack four good sections of honey, sealed, which I took out. But, unfortunately, as it turned out, in both hives the queen has been up amongst the sections and laid drone eggs therein, completely spoiling some of them. There was no worker brood, only drones, and some others of the combs built in sections were all drone-cell, but, as no eggs had been deposited in them, the bees have filled them with honey. 1. Will you please tell me the reason why the bees did all this section-spoiling and drone-comb building? I placed a second rack of sections underneath first on each hive, as I do not wish the bees to swarm, and if I have now to put on excluder zinc I may shut the queen up amongst the sections. 2. Is this not so? 3. Just in front of one of my hives there are always a lot of dead bees and drones on the ground. The bees in hive appear healthy and very lively; I cannot, therefore, understand why this should be, as it seems very early for drones to be turned out. Hoping you will be able to help me, and thanking you, I send name, etc., and sign—M. B., Torquay, June 10.

REPLY.—1. The queen no doubt passed up into the sections because there was no hindrance to her so doing. It is because of such risks as you ran that queen-excluders were invented. 2. Yes; you must not use an excluder without first being sure that the queen is in the brood-chamber below. 3. You had better examine the combs, and in so doing endeavour to find out the cause of trouble mentioned. This is just what we should do if the hive was ours, and it is most difficult to diagnose cases safely from a distance.

[3321] *Using Excluder-zinc Below Shallow-frames.*—I shall be much obliged for advice on the following points. About ten days' since I supered a strong stock with shallow-frames, omitting the excluder-zinc on the advice of a friend. However, seeing from your paper that the zinc should be used, I decided to insert it, and did so three days ago, examining the shallow-frames, and making sure, as I thought, that the queen was not there. However, on examination to-day I find that about one-third of the frames have unsealed larvæ in the combs, while about another third contains honey, and the remainder empty cells. This shows the queen has been up, though to-day's examination has not revealed her presence there now, but, as I am only a beginner I may have missed her. 1. Would it be best to remove the zinc now, or leave it on and await further developments? The stock is very strong, and working well. 2. I am working a section-rack on my second hive without any excluder; is this right? Thanking you in anticipation of reply—J. H. W., Bingley, June 10.

REPLY.—1. We advise you to have another look over the frames, and if queen is not seen, use a spare frame-box and set each frame in it as examined. It is almost certain that you will see if queen is in the upper chamber if this is done. The brood now in frames may then be allowed to hatch out, and they will be refilled with honey. 2. Some bee-keepers use no excluder-zinc below sections; but you will see the result to a beginner like yourself on this page.

[3322] *Queens and Dwindling Stocks.*—As a regular reader of your valuable paper, I enclose a dead "queen bee" which I found in a hive (about three years old) along with about twenty-five bees, all that were left alive. There was no brood or eggs in combs, only a small quantity of dried-up sealed cells, the contents of which were dried up, and had caps of a very dark colour, no objectionable smell, but I destroyed the lot. Kindly say if you consider the queen old and worn out. There was about 2 lb. or 3 lb. of dark honey in the combs. I think the queen must have failed to rear any young bees in the autumn of last year, and the stock has died out in consequence. I send name, etc., and sign—APIS, Tredegar.

REPLY.—Queen sent was smashed in post through insufficient protection. We cannot, therefore, give an opinion on her age. It is plain, however, that she was old and failing, judging by your account as given above.

[3323] *Young Queens Cast Out.*—As a constant reader of your valuable journal, and a beginner in bee-keeping, I am asking a few questions on bee-management which are beyond my powers of answering for myself. I possess nine hives of bees, and thought they were all doing well, but for some time past they have been casting out a lot of young bees, seemingly helpless—some deformed in different ways. I went over the hive to-day and found three frames containing brood in various stages, some dead, some dying, some upside down, and so on. It was only on the three frames; the other eight frames seemed all right, and brood healthy, but the bees, as they hatch out, are brought on the flight-board and there left, then crawl a little way, and then die! They seem to have no power in their legs or wings. I have asked a brother bee-keeper to look at them. He states it is not foul brood, and advised me to write to you. Why I want an answer

so soon is because I am afraid of them coming to grief.—J. S., Newton Poppleford, Devon, June 7.

REPLY.—From symptoms described we think that the young bees cast out have suffered from lack of warmth during the hatching-out process. It is well known that during the latter stages of development the bee needs a proper temperature, or the resultant bee is often deformed or aborted in some way. We think the trouble complained of will disappear now that we are having some real summer weather.

[3324] *Bees in Skep Refusing to Work.*—Being a constant reader of the B.B.J., and also an interested reader of your kind replies to your various correspondents, I should be extremely obliged if you could tell me what I had better do with one skep. I am the happy possessor of six frame-hives, all doing well, and I have one skep which I held, as I thought, for swarming, but they neither swarm nor work—"lazy beggars" is the only name I can give them. I opened the top of skep and placed a board with much smaller skep above it, and on examing the same the bees were clinging very contentedly all over the inside of same, and also on the alighting-board; they simply bask in the sun, consequently they do not earn their keep, and I am puzzled. If you would kindly give me advice I should be grateful.—W. J. W., Salisbury, June 11.

REPLY.—The redundant energy with which some stocks of bees labour compared with other colonies is as remarkable in bee-life as it is among humans. We never yet came across a stock so completely lazy as yours is stated to be, and we should try and find out if there is not some cause for their inertness. Why not drive the skep and make sure it has a laying queen? Or it may be affected with disease, or its combs pollen-bound. In fact, many causes may very well account for the poor bees being wrongly dubbed lazy beggars if you will examine the stock. We should, if the skep was ours.

[3325] *Foundation Breaking Down.*—1. Will you please tell me what is the cause of "Weed" foundation breaking down when a swarm is hived upon it? I do not know if the warm weather may cause it to give way, or should you say the foundation was bad? I know it was well secured in the slit of top-bar and screws put through the bar. 2. Should I have avoided the trouble by not hiving the swarm until the cool of the evening, and have wired the foundation in the frames? 3. What can I do with the broken-down foundation now in the hive? A few words of advice will oblige. I send name, etc., for reference, and sign—FORESTER, Coleford.

REPLY.—1. "Weed" foundation, if genuine, will not break down in the hands of experienced bee-keepers; but, along with all other makes of comb foundation, it must be used with some knowledge of what it will stand under certain conditions. For instance, if full sheets are used, the frames should be "wired," especially if the swarm is hived at once, and on a warm day. But in all cases only a single quilt (a very light one) should be laid on top-bars after hiving, and remain there the cool of the evening, or till next morning, in warm weather. 2. Yes, in a more or less degree; but an experienced hand can hive a swarm on full sheets of foundation unwired by taking the necessary precautions. 3. The frames of broken-down foundation must be removed at once, and be replaced by wired sheets.

[3326] *Forming Nuclei and Various Queries.*—I shall be glad if you will kindly answer the following questions:—1. In a not very strong stock of bees on May 18, there was a sealed queen-cell. There were no drones flying up to that date, nor had I, or my neighbouring bee-keepers, seen any either on the wing or in hives, though I have kept a careful look-out for them in all my sixteen stocks examined up to June 2. There was sealed drone-brood, but not a great quantity. In another, and very strong stock, there are many queen-cells; several, on May 28, were sealed. I wished to make some nuclei, but as no drones appear, I thought it useless to attempt it. The weather, too, is windy and cold, and not favourable for bee-work. What becomes of the many queen-bees, hatching before they are wanted? 2. I have boiled for more than an hour a large bundle of felt and carpet coverings from foul-broody stocks, and am putting them in strong phenyl solution for a week. Will they be quite safe to use then? 3. I notice this year, as last, that bees seem unwilling to work on the last frame; near the napthaline half-balls, that is. Would it be better to take these out during the busy weeks? Doing so would increase the chance of foul brood, which seems to be a permanent institution. 4. In forming nuclei, is it better to cage the inserted queen cells? I have succeeded in many cases without doing so. But in several where no cages were used, the queen-cells were torn open, in some cases, two or three times before I succeeded. This was the case during some prolonged cold weather last summer. 5. In the "Guide Book" it is recommended that (see p. 154) honey from diseased frames should be extracted, when treating the stock for foul brood. But would this not infect the extractor, which is rather difficult to clean—at any rate properly? I like to use thin honey from non-infected combs for feeding purposes: I fear that the extractor, even if cleaned, might infect this. And would

not spraying with phenyl make the honey in combs (same page) unpleasant for food?—B., Lincs.

REPLY. — 1. Professional queen-rearers have their own several methods of contending with trouble arising from adverse weather during their active working season, but the ordinary bee-keeper who attempts to raise his own queens must take care to arrange his procedure so that drones shall be flying freely when the young queens are ready for mating, and queens hatched before drones appear are perforce killed off as useless. 2. You should boil for one and a half hours to destroy the vitality of foul-brood spores. No need for any further steps after this. 3. No; most bee-keepers take care that the naphthaline has not all disappeared when putting on supers. 4. Much depends on the course you follow in forming nuclei. The cells should, as a rule, be protected, and though you may dispense with a cell-protector, it is not safe to do so. 5. Care should always be taken in cleaning the extractor properly after use with suspected combs.

[3327.] *Dealing with Suspected Stocks.*—I understand you are willing to assist B.B.J. readers by giving your opinion re foul brood, and am enclosing herewith a piece of comb taken from my weakest stock, which appears to have several cells in which the brood is not hatching properly. Will you, therefore, kindly let me know if there is foul brood in sample sent? I may say that only one comb is affected in this way, the brood on the other combs appearing quite normal, but I have this evening treated the stock as a swarm, and put them into a clean hive on full sheets of foundation so as to be on the safe side, as I have fifteen other stocks in my apiary, all perfectly healthy, very strong, and working well in supers. I am not destroying the old combs until I get your opinion whether it will be quite safe to use these again. This stock in question is a hybrid Italian colony, which was very strong last season. The bees were very irritable and difficult to manipulate, and although on this account they did not get so much attention as my other stocks, they gave me as much, if not more, surplus than any other hive. This season, however, they have dwindled very much; they are also now very quiet to handle. I think the bees in this village are quite free from foul brood, although we are surrounded by infected districts a few miles away in each direction. In thanking you in advance for reply, may I at the same time express my appreciation of your most interesting journal, which I look forward to with pleasure each week. I send name, etc., for reference, and sign—E. F. T., Cornwall, June 6.

REPLY.—The dead brood in comb sent agrees with the description given of "black brood" in the last edition of Root's "A B C of Bee-culture" (page 158), and it may be that the stock in question will cure itself during the present fine season. We say this because it is known in the U.S.A. that colonies infected with "black brood" frequently overcome the disease in a good honey-season. There is no foul brood in your sample.

Echoes from the Hive.

Douglas, Isle of Man, June 8.—Weather here is very good for bees, honey being gathered freely from hawthorn, strawberries, and other sources. Stocks are strong, and withal good-tempered. I had a grand swarm on Sunday last, June 3.—T. J. HORSLEY.

BEES AT A GARDEN PARTY.

On Saturday, June 9, at a garden party kindly given by Mr. and Mrs. C. P. Ford, Vicarage Road, Leyton, a lecture was given on bees by Mr. A. W. Salmon, of the Essex and Suffolk Bee-keepers' Association. An interesting account of foreign bees and bee-keeping was given. Reference was made to ancient and modern methods of keeping bees, the treatment of swarms and stocks, the history of the honey-bee and its work in relation to the pollination and fertilisation of flowers, and some description of the anatomy and physiology of the queen, worker, and drone. A display of appliances was made, and a collection of wild bees, flowers, cocoons of the leaf-cutter bee, and other interesting items was shown. A good number of people attended, and a nice sum was added to the fund for the renovation of the Vicarage Road Baptist Chapel. The Rev. G. Robinson presided, and votes of thanks were given to the host and hostess and to the lecturer. One humorous member of the company said that he had learned something that afternoon: First, it was the ladies who did all the work; and second, that the gentlemen were so docile and harmless.—(*Communicated.*)

Bee Shows to Come.

A nominal charge of 2s. 6d. is made for notices (not exceeding 7 lines) in this column, 10 lines charged 3s. 6d., up to 15 lines 5s., which covers cost of insertion from order till date of show. Cash should accompany orders for insertion.

June 12-15, at Portsmouth.—Show of Honey, Hives, etc., in connection with the Royal Counties' Agricultural Show.

June 27 to 30, at Derby.—Royal Agricultural Society's Show. Bee and Honey Section under the management of the B.B.K.A.

July 18, at Ashby-de-la-Zouch, Leicestershire.—Show of Bees, Honey, and Appliances, in connection with Annual Flower Show. Three open and two local classes, and one L.B.K.A. Bee demon-

strations. Schedules from J. H. Dunmore, Secretary, Alandale, Ashby-de-la-Zouch. **Entries Close July 16.**

July 19 and 20, at Gainsborough.—Show of Honey, Hives, and Bee Appliances in connection with the Lincs Agricultural Society. Bee Department under management of the Lincs B.K.A. Fourteen classes. Liberal money prizes and silver medals. Schedules from R. Godson, Hon. Sec., Lincs B.K.A., Tothill, Alford, Lincs. **Entries Close June 15.**

July 25 and 26, at Cardiff.—Annual Show of the Glamorgan B.K.A. in connection with that of the Cardiff and County Horticultural Society. Honey, Wax, Appliances, etc. Classes for members, novices. Five open classes, with prizes for sections and Bee-appliances, 30s., 15s. Entry fee for one or more of the open classes to non-members, 2s. 6d. Schedules from Wm. Richards, Hon. Secretary, The Red House, Gabalfa, Cardiff. **Entries close July 20.**

July 28, at Chester.—Cheshire B.K.A. Show in connection with the County Agricultural Society. Open classes for Hives, Observatory Hives, Sections, and Extracted Honey. Baroness Burdett-Coutts' prize hive for best exhibit shown by cottager member. Seven classes for members. Schedules from T. A. Beckett, St. Werburgh Chambers, Chester. **Entries Close August 8,** or at double fees, **August 15.**

August 8 to 10, at Middlesbrough.—Show of Honey, etc., in connection with the Royal Yorkshire Agricultural Society. Schedules and form of entry from John Maughan, Secretary, Blake-street, York. **Entries close June 30.**

August 9, at Madresfield, Malvern. — Annual Show of the Worcestershire Bee-keepers' Association. Open class. Schedules from Mr. Geo. Richings, 2, Shrubbery Terrace, Worcester.

August 16, at Yetminster, Dorset. — Annual Show of the Yetminster and District B.K.A. held in a field kindly lent by Mr. Jolliffe. Four open classes, including three 1-lb. jars extracted boney, three 1-lb. sections, and cake of beeswax. Schedules from G. Leeding, Hon. Sec., Bradford Abbas, Sherborne. **Entries close August 10.**

August 30, at Montgomery.—Honey Show in connection with Horticultural Exhibition. Two open classes for six 1-lb. sections and six 1-lb. jars extracted honey, 21s., 10s. 6d., 5s., in each class. extracted honey. Prizes, 10s., 5s., 2s. 6d. Entry fee, 1s. each class. Schedules from Mr. W. J. Jones, Secretary, Montgomery. **Entries close August 23.**

September 8, at Dumfries.—South of Scotland B.K.A. 14th Annual Show of Honey, Bees, and Appliances. Five open classes—viz., three 1-lb. jars, three 1-lb. sections, and for single jar and section (free entry), and cake of wax; also handsome money prizes and valuable medals, for members only. Schedules from Jas. Johnstone, Sec., Nelson Street, Maxwelltown. **Entries close September 1.**

September 13, at Castle Douglas.—Honey Section, Dairy Show. Liberal prizes. Five open classes—viz., three 1-lb. jars, three 1-lb. sections, single jar, single section, and for cake of beeswax. Schedule from Jas. Johnstone, or from L. Aird, Hardgate Schoolhouse, Dalbeattie. **Entries close September 1.**

Notices to Correspondents & Inquirers

Letters or queries asking for addresses of manufacturers or correspondents, or where appliances can be purchased, or replies giving such information, can only be inserted as advertisements. The space devoted to letters, queries, and replies is meant for the general good of bee-keepers, and not for advertisements. We wish our correspondents to bear in mind that, as it is necessary for us to go to press in advance of the date of issue, queries cannot always be replied to in the issue immediately following the receipt of their communications.

*** Mr. W. Bradburn, Local Hon. Sec., Cheshire B.K.A. (whose address is Clarville, Beaufort Avenue, Brooklands), kindly writes in similar terms to Mr. Pidduck (p. 225) offering help to "C. H., Sale."

W. H. W. (Nottingham).—Advanced Bee-culture.—The author of this work is Mr. W. Z. Hutchinson, editor of the *Bee keepers' Review*, an American journal of high repute. The book was reviewed in our issue of March 1 this year. It is written on entirely different lines to the "A B C of Bee-culture."

Bluebottle (Darlington).—Insect Nomenclature.—1. The insect sent is not a bee at all, but a fly, though it so closely resembles the drone-bee as to be commonly known as the drone-fly. 2. No shallow-frames are made with thick top-bars, but if boxes for holding shallow-frames are properly made there should be no brace-combs between supers.

J. E. Mills (Paris).—The "Guide Book" in French.—"The British Bee-keepers' Guide Book" may be had in French, though not the later editions. We can, no doubt, put you in the way of obtaining a copy if desired.

Justicia (Sidmouth).—Decoy Hives.—It is not at all fair for neighbours to keep hives prepared for swarms in their gardens with entrances open and ready as a tempting bait for swarms belonging to others to take possession. But there is no law to prevent it. If your swarm has entered a hive so placed, and you can prove the bees to be yours, a claim may be made for the bees (or value of same) in the county court.

Suspected Combs.

An Irish Reader (Ballymahon, Co. Longford).—1. Both pieces of comb sent are affected with foul brood, No. 2 being very badly diseased, and No. 1 in a fair way to become equally so. It is a great misfortune that the hives from which samples are taken was allowed to be "robbed" out by other stocks, because it is certain that the latter will be affected. You should use naphthalin without delay in the hives that robbed the diseased stocks. 2. On no account must the hives in question be used for swarms without thorough disinfection, and all quilts should be destroyed along with combs and frames.

G. W. (Horeham Road, R.S.O.).—See above reply to "An Irish Reader," as it applies equally to your case with regard to using the hive for swarms.

C. P. (Hailey).—Foul brood is evidently breaking out in the stock your sample comes from, but most of the plentiful brood (and eggs) in comb look well, indicating a good queen. You should take steps to stop the progress of disease by using preventives.

J. H. W. (Apsley Guise).—We find distinct signs of foul brood in one of the six cells sent. It will, therefore, be far best to burn the skep from which the swarm came, together with combs and honey it contains, after driving the bees and young queen (which will probably be

comes from, but most of the plentiful brood (and eggs) in comb look well, indicating a good queen. You should take steps to stop the progress of disease by using preventives.

J. H. W. (Apsley Guise).—We find distinct signs of foul brood in one of the six cells sent. It will, therefore, be far best to burn the skep from which the swarm came, together with combs and honey it contains, after driving the bees and young queen (which will probably be mated by this time), and treat them as a swarm

ANXIOUS (Stone).—There is foul brood (in the incipient stage) in comb sent.

ANXIOUS (Herts).—No disease in comb; the brood has died from "chill" only.

P. W. M. (Harleston).—There is foul brood in comb, but it appears not to be a bad case. Thanks for packing sample so neatly. Would that others would do likewise.

R. E. S. (Hants).—No disease in comb, but latter is so old and crooked that all such combs should be got rid of by burning. The larvæ in cells are normal and right, except a few at side, which are "chilled."

W. H. S. (Birmingham).—No disease in comb, but drone-brood in worker-cells makes it clear that the queen is a worthless drone-breeder. The stock is, therefore, of no value.

J. W. C. (Shanklin, I.W.).—Bad case of foul brood. It is wasting time to try and cure such a stock as sample comes from. We should burn the lot.

C. E. B. L. (Warwickshire).—Bad case of foul brood, quite beyond curing. It was quite a misfortune to purchase stocks in such condition, and as the disease is of very long standing they would no doubt be in a bad way before you went abroad. We strongly advise you to clear the lot out, as your bee-keeping will be a failure so long as they form part of your apiary. Many thanks for packing combs so neatly and well for inspection.

Special Prepaid Advertisments.

Twelve words and under Sixpence: for every additional Three words or under, One Penny.

Advertisements for current Issue must be received by first post on Tuesday.

CHAMPION "NEVER SWARM" QUEENS, guaranteed healthy. Virgins, 2s.; Fertiles, July, 5s.—HARRIS, Wavendon, Bletchley, Bucks. P 49

FOR SALE, THREE HIVES and BEES, or Hives separately. Exchange for Observatory Hive.—DAY, The Cottage, Keresley, Coventry. Q 30

TWO STOCKS, on eight Standard Frames, 19s. each, with 1905 Queen. Guaranteed healthy. Boxes to be returned.—J. J. HARDING, Trindon, Trindon Grange, Durham. Q 41

STRONG, HEALTHY NATURAL SWARMS, 12s. 6d. Skeps free. Safe delivery.—CADMAN, Cedsall Wood, Wolverhampton. Q 40

FOUR STRONG HEALTHY STOCKS, in second season hives, with section racks, dividers, and foundation, four shallow crates, with frames and foundation. What offers? Must sell.—BERES, 19, Perseverance Street, West Hartlepool. Q 39

WANTED, a YOUNG MAN, as GARDENER (no glass), who has a knowledge of bee-keeping preferred.—Particulars to C. H. HAYNES, Hanley Castle, Worcester. Q 38

STRONG SWARMS, 1905 Queen, 12s. 6d., 13s. 6d. Three Frame Stocks, 1906 fertile Queen, 12s. 6d. Guaranteed healthy; 1906 fertile Queens, 5s.—W. WOODS, Normandy, Guildford. Q 37

SWARMS FOR SALE, various weights, 2s. per lb. Also Five Straw Skeps of Bees, 10s. each.—J. WAYMAN, Cottenham, Cambridge. Q 31

QUEENS.—Native, fertile, 2s. 6d.; Virgins, 1s. 6d. Ready now. Gross wide "W.B.C." Ends, 2s. 6d.; Drawn-out Combs, 8d. each. Wellfilled Sections wanted. New honey, large or small quantities. S.C. jars, 8s. dozen; bulk, 53s. cwt. Sample 2d.—CHANTER, Tattingstone, Ipswich. Q 32

NOW READY, NATURAL SWARMS of my hardy prolific strain English Bees, not less than 4 lbs., 12s. 6d.; 5 lbs., 15s.; 6 lbs., 18s. Guaranteed healthy and safe arrival. Packages to be returned.—WHITING, Valley Apiaries, Hundon, Suffolk. Q 33

YORKSHIRE BEE-KEEPERS' SUPPLY STORES.—Everything of the best. Lists free.—DIXON, Expert, Leeds. Q 34

WANTED, a few good healthy SWARMS, at once.—Particulars to DIXON, Beckett Street, Leeds. Q 35

1906 SELECTED QUEENS, Woodley's strain, guaranteed healthy and safe arrival in safety introducing cage, 3s. 6d.; Virgins, 1s. 3d.—TOLLINGTON, Woodbine Apiary, Hathern, Loughboro'. Q 36

NEW SECTIONS, HONEYCOMB.—Supplies wanted, at once.—SMITH, Cambridge Street, Hyde Park. Q 29

BRICE'S QUEENS. — Safe delivery guaranteed, in introducing cage, with full instructions, 5s. 6d. —BRICE, Brigstock Road, Thornton Heath.

SWARMS FROM BAR-FRAME STOCKS, 10s. and 12s. Cases to be returned. — H. MAY, Kingston, Wallingford. Q 21

SELLING OFF.—Bar-frame Hive, with frames, excluder, two supers, with combs, 12s. 6d.; 1½ lbs. super, 1½ lbs. brood foundation, 4s.; Guinea Extractor, good condition, 14s. 6d.! Honey Ripeners, complete, 9s.—HOPWOOD, Newton Street, Clitheroe, Lancs. P 95

THIS SEASON'S pure Oxfordshire EXTRACTED HONEY, 5½d. per lb., in large quantities.—REV. F. E. FOSTER, Swinbrook Vicarage, Burford, Oxon. P 100

PRIME NATURAL SWARMS FOR SALE, this season, as usual, 12s. 6d. and 15s. each; cases to be returned. Please note change of address (telegrams, Wilkins, Letcombe Regis).—PERCY WILKINS, Letcombs Regis, Wantage. P 99

QUEENS (Doolittle celebrated strain of Improved Italians).—A customer writes: "The four Virgins I had from you last year all mated within three days of receipt of same. They are my strongest stocks this season. I supered them a week ago, and they are filling up fast. They are the best workers I ever had." Virgins, 1s. 6d.; Fertiles (after June 10), 5s. Safe delivery guaranteed. First come, first served.—DAVID TAYLOR, Ilminster. Q 15

QUEEN REARING.—No trouble to work; no expensive appliances; can't fail; four cages and full instructions, 2s. 6d. — MEADOWS, Syston, Leicester. Q 10

PRIME NATURAL SWARMS, May and June, 12s. 6d. each. Boxes, 1s. Cash with order, or deposit.—G. JORDAN, Steeple Aston, Oxford. O 91

Editorial, Notices, &c.

THE "ROYAL" SHOW AT DERBY.

ENCOURAGING PROSPECT OF SUCCESS.

The date of finally closing entries at the "Royal" Show—which opens at Derby on Wednesday next, the 27th inst., and continues till the following Saturday—having now gone by, we are enabled to make the satisfactory announcement that the total number of exhibits entered for competition is a record one for the past eight years. Moreover, this gratifying result has been appreciably assisted by the promised display in the bee-department. The cold weather which prevailed for some weeks prior to the closing date has, no doubt, told adversely on the entries for new season's honey. The hive and bee-appliance section, however, will be a fine one, and to meet all demands for space the shedding is to be extended in such a way as to afford greater facilities for the inspection of exhibits by visitors, and having them explained by those in charge. This desirable advantage will be further assisted—from the business standpoint—by providing the class for "Observatory Hives Stocked with Bees" with a separate gangway, thus avoiding the inconvenient "blocks" caused by visitors crowding round the "Observatories" anxious to see the queen bee. The increased space also affords ample room for the "Trophy" class, so there will be no crowding together of these very attractive exhibits.

We have been favoured with an advance "proof" of the plan of the show-ground, and note that the bees are favourably placed near the horse-ring, grand stand, and Royal pavilion. The position of the bee-section is close to the hoarding which divides the show-ground from the Derby Canal; and the bee-tent, where lectures and demonstrations with live bees are given at frequent intervals each day, is close by.

By noting these few particulars visitors will, on entering the show-ground, only need to bear to the left, past the "Implements" and "Machinery in Motion" sections, till the poultry-shed and sheep-pens are seen, when the "Bees" will be found without any difficulty.

The decision of the Royal Agricultural Society to give up the permanent show-ground in London, and resume the change of venue each year for its annual show, may be said to have inaugurated a new era in the prospects of the society, and there is every indication of the first show held under the changed auspices being a substantial success.

Obituary.

PASTOR EMERITUS PAUL SCHÖNFELD.

It is with deep regret that we have to record the death, after a protracted illness, of this eminent scientist and bee-keeper, at the ripe age of 85.

Paul Schönfeld was born in 1821 in Sulau, Lower Silesia, and after studying theology in Breslau, was appointed pastor in Teutschel where he remained for forty-two years, until his retirement in 1889, when he removed to Lieguity.

Schönfeld commenced bee-keeping with a log hive, and, taking a scientific interest in the pursuit, very soon became a bee-master. He studied particularly the anatomy and physiology of the bee, and we are indebted to him for what we now know about brood-food and Royal jelly. He was the first to discover the true use of the stomach-mouth, and to demonstrate how the bee is able to collect nectar and to use it either as food for herself or for the brood. He also showed that brood-food, which was supposed by Schiemens and others to consist entirely of a secretion produced by glands, is really elaborated in the chyle-stomach of the bee, although a secretion from the glands may also be added. The prolongation into the chyle-stomach he demonstrated came into use when this chyle-food had to be ejected for the use of the larvæ. Space will not permit us to describe his discoveries more fully, but full descriptions, with illustrations, will be found in "The Honey Bee."* Schönfeld also showed that drones also were dependent on chyle-food and that if it is withheld for three days they die. Royal jelly he also demonstrated to be chyle-food.

He was a prolific writer, and for thirty years his articles appeared in the *Bienenzeitung*, published in Richstadt. His discoveries led Dr. Wolf to write his classical work on the organ of smell in the bee. Pastor Shönfeld's discoveries and writings are of great importance to bee-keeping, and will be of lasting benefit. His loss will be felt by all bee-keepers as that of a great man, and as of one who has been of inestimable use to the industry.

REVIEWS.

Botanical Postcards.—We have already noticed the postcards illustrating British ferns and leaves of trees brought out by the Country Press, 19, Ball Street, Kensington, W., and in continuation of the botanical series they have just issued two sixpenny packets of postcards giving the exact figures of the winter forms of the

* By T. W. Cowan. Published at this office.

beech, chestnut, horse-chestnut, maple, oak, and walnut; also representations of the boles of these six trees—every detail of the bark being shown. On each is a description taken from *Sylvan Winter* and *Our Woodland Trees*, by Francis George Heath, by whom also the photographs are produced.

COUNTRY IN TOWN EXHIBITION.

Her Majesty the Queen has graciously extended her patronage to the "Country in Town" exhibition, which will be opened by H.R.H. Princess Christian in the Whitechapel Art Gallery, at half-past three o'clock on July 5. Plans for beautifying crowded areas in London will be on view. An endeavour will also be made to show how much of Nature still remains in the Metropolis, or has been brought back to it, not to mention that which will be found on its outskirts. Suggestions will be thrown out with regard to nature study in urban schools, and there will be aquaria, vivaria, and bee-hives, nesting-boxes, fern-cases, and flower-tables.

A series of afternoon and evening lectures is being arranged, dealing with many subjects cognate to the idea that underlies the exhibition—such as gardens, garden cities and suburbs, tree-planting in London, bees, and natural history generally.

The exhibition will be open until July 19, and as admission will be free, contributions are invited towards the necessary expenses. All communications should be made to the honorary secretary, Mr. Wilfred Mark Webb, at Toynbee Hall, Whitechapel, E.

Correspondence.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper We do not undertake to return rejected communications.

**** In order to facilitate reference, Correspondents, when speaking of any letter or query previously inserted, will oblige by mentioning the number of the letter as well as the page on which it appears.*

NOTES BY THE WAY.

[6335.] We of the rank and file are, as usual, Messrs. Editors, discussing the weather, or rather its "vagaries," which has become "stock talk" when bee-keepers meet, and the present season's weather has been more than usually exceptional in its variations. Just imagine a whole week of dull, cold, N.E. winds in the second week of June! That is how we have fared in West Berks; but, still hoping on, we are, as I write on the morning of the 18th, cheered by bright sunshine and the barometer rising towards "set fair." The air is warm with a soft breeze from S.W., and the bees are pouring out of the hives in shoals in quest of honey. I trust the present week may make some amends for the past one, but wasted time cannot be recalled, for the beautiful fields of sainfoin has been despoiled of their blooms, which were cut and restored to their pristine condition by the mowing machines, busy at work cutting for the whole of the first week of the month.

Those of our craft who are located in good bee-keeping districts will now have their first supers nearly completed and should see to putting on another rack under the first as soon as the latter begins to be sealed over. On the other hand, if this extra room is given too early and the honey-flow suddenly ceases, one is apt to get a big lot of unfinished sections, instead of a few dozen well-filled and sealed ones, which are marketable at a good price, and give much pleasure to the producer who desires to make a present to his friends.

Wiring Foundations.—I advise our new recruits to wire every sheet of stock foundation they use, especially those given to full stocks; otherwise it is possible that the cells may become so much stretched that the resultant combs will be useless for either worker or drone-brood. Complaints of wax sheets stretching have appeared in your pages of late, but "wiring," if done well, obviates this nuisance and also prevents the sheet of wax breaking off close to the top-bars of frames, and dropping on the floor, only to be worked by the bees into a fantastic mass of useless comb. Unless full sheets of foundation are wired, I would prefer strips only for hiving swarms on. I once more urge that care be taken to have all hives set perfectly level on their stands so that the combs may be built and attached to the inside of frames, and the best results in comb-building are obtained by taking this precaution.

Hiring Swarms from Difficult Places.—Referring to the swarm in quickset hedge (6334, page 235), when swarms cluster in centre of hedge that cannot be shaken they may be soon made to move from grass, etc., if a carbolised feather is inserted into the grass below the bees; then have your skeps ready, and as soon as the bees are running fix it so that they can run up into the skep. This done, you will have but little trouble in hiving the swarm. We have this job every year, as our apiary is enclosed by a whitethorn hedge 7 or 8 feet high.—W. Woodley, Beedon, Newbury.

PRICE OF NEW SEASON'S HONEY.

[6336.] In your issue of the 14th inst., we notice an advertisement by a clergyman offering "this season's pure Oxfordshire extracted honey" at the price of 5½d. per lb.; and we wonder whether it has occurred to this rev. gentleman — who probably keeps bees simply and solely for amusement—that in selling honey of this description, at this time of year, at such a low price, he is contributing towards a state of things which tends ultimately to take the bread out of the mouths of poor men who rely upon their bees to help providing them and their families with the necessaries of life? We are constrained to write you on this matter before the year's sale of honey really commences, in the hope that the publication of our letter may do something towards instilling into the minds of bee keepers the fact that as the demand for English honey exceeds the available supply, a little trouble will enable them to find a sale for good honey, prepared for market in a careful manner, at prices which will remunerate them for the labour and trouble necessary for its production and proper preparation for sale. It probably is in some cases only thoughtlessness which causes people to offer honey at absurd prices, but in most cases, it is the amateur who keeps bees more for amusement than profit to whom we can trace this want of thought for the interests of those who endeavour to supplement, in many cases, all too scanty and hard-earned wages; and we feel that, short of a bee-keepers' protection league, your influence for good is the strongest aid we can invoke in such a cause.—JOHN THARP, E. T. HART JONES, Blagdon, Bristol, June 18.

BEE NOTES FROM CORNWALL.

FOUL BROOD PROPAGATION.

[6337.] The case of foul brood recently reported as in my apiary (page 234) came in a skep from Cambridgeshire. The bee-keeper from whom it was bought declared the stock free from foul brood, and I have no doubt honestly believed what he said. I did not discover its condition till, on examining the frames below after the bees had taken possession, foul brood was seen. Even then I thought the infection might have come from a local source, but it so happened that Mr. Odgers, of Red ruth, also had a skep from the same place, which I got for him, and his bees also had the disease. I promptly drove both lots of bees out, dealt with them in the usual way, and burned both the skeps. With these skeps there came also another pest in the shape of true wax-moth larvæ, veritable giants, and in great numbers.

Some years ago I got several skeps from the neighbouring county of Hunts. These were free from foul brood, but the moths that came with them were a plague, and I did not free my apiary from them until this season. This leads one to conclude that the Fen district is specially troubled with wax-moth. In dealing with the pest myself, I found that if all empty combs are well fumigated with formalin the moth is completely destroyed. My plan is to put all unused combs, hives, etc., once a year into a small room, and, after closing up all apertures, the combs, hives, etc., are exposed to the strong fumes of formalin mixed with carbolic acid or phenyl, for forty-eight hours. If this mixture be given very strong and in good quantity, I am inclined to think that foul brood spores are rendered harmless after forty-eight hours; but, of course, any honey in combs is not sterilised. Those trying the above remedy must not spare the formalin when fumigating, but use plenty.

When formalin is evaporated in a room, the door should be left ajar for some time before entering the room, otherwise—even after forty-eight hours—the fumes hurt the eyes very much, and also affect the air passages to the lungs.

There is probably nothing so biting as formalin when evaporated over a lamp.

I found about a dozen cells of foul brood this year in two other hives, and a spraying with soluble phenyl seems to have quite cured them. In one hive I found a cell sealed over from last year. It contained foul brood. While sealed up, the contents of cell were, of course, quite harmless. I cleared it out.

Bee-keepers sometimes report that formalin has even sterilised the sealed honey cells, because they have given such back to the bees and the disease has not broken out again.

In my opinion they never had the disease in the spore stage at all; consequently, the honey would not be infected. Foul brood has never reached the spore stage in my own apiary; consequently, fuming makes me absolutely safe.

After four years in the midst of infection I have not had more than four stocks affected with the disease. By keeping one's bees well fed they are not so likely to go robbing, and I do not, as a rule, retain old combs longer than two years, and by renewing so frequently I take away old and possibly infected stores, so that in the breeding season the bees usually get fresh food free from germs. Still all this means constant watchfulness, work, and extra expense, and makes bee-keeping less pleasurable than if we had no foul brood to fear.

I formerly used Izal for spraying, be-

cause it was easiest to obtain, but I found it choked the sprayer up, whereas soluble phenyl does not.

I must say in conclusion that I find the information in Mr. Cowan's "Guide Book" absolutely reliable. This must not be taken to mean that other works may not be reliable too. Redruth up to the present year was a hot-bed of disease. Just now, however, the modern bee-keepers among us, at any rate, are almost free of it. The expert has cleared out the worst cases, and the skeppists are now our chief cause for anxiety. Not that bees may not be well kept in skeps, but simply because those who so keep them do not as a rule, understand bee-keeping as a science. — W. J. FARMER, Redruth.

SWARMS.

[6338.] I cannot understand why so much value is attached to prime natural swarms. According to my experience they are seldom headed by a young and reliable queen. As an instance, a very large stray swarm hived near my apiary three years ago, on June 30, yielded 30lb. of surplus honey in fourteen days, besides plenty of winter stores. But the bees dwindled to three or four frames by the following spring, and the brood in the hive was then a mixture of drones and workers. The swarm was hived on drawn-out worker comb too! Give me a nucleus colony with a young queen for making a good profit. I have already put second supers on some of last year's nucleus colonies. Moreover, they had sealed brood on May 10, from side to side and from top to bottom of frames, with only about a couple of pounds of stores or empty combs in brood-nests, and hardly any drone-comb in the twelve frames. — A. H., Wavendon, Bucks, June 17.

BEE-NOTES FROM WORCESTER.

A POOR PROSPECT FOR 1906.

[6339.] Bees in this district have done exceedingly well during the last fortnight, a good quantity of finished sections having been taken off and some extracting done from shallow-frames. Swarms have also been plentiful where the bees are healthy, and should the weather again favour us after the recent refreshing rains, bee-keepers should reap a good harvest. Foul brood is still with us in some apiaries, but not so bad as in 1903 and 1904. I am trying an experiment for the cure of foul brood in several parts of the district, which has, so far, answered all expectations, and hope to report results in the B.B.J. for the benefit of other bee-keeprs at a later date, should the experiment prove successful.—JAMES S. BAILEY, Expert W.B.K.A., Evesham, Worcestershire, June 16.

THE QUEEN-REARING INCIDENT.

[6340.] Referring to the mention of a "Queen-rearing Incident" by several correspondents of late in B.B.J., I have myself had several similar experiences of worker bees being found dead in queen-cells, and think it can be accounted for very simply by the bee entering the cell after the queen cuts her way out, often having the capping hinged at one side. The worker-bee on entering the queen-cell to clean it out, is probably heard by the other workers, who, thinking perhaps that another queen is about to emerge quickly close the hinged capping, thus imprisoning the unfortunate worker which soon dies. If "A. E. E." has not disturbed the nucleus mentioned on page 222, he will possibly find a fine laying queen in it by this time. — ALEX. LOW, Summerhill, June 12.

HONEY IMPORTS.

The value of honey imported into the United Kingdom during the month of May, 1906, was £6,028.—From a return furnished to the BRITISH BEE JOURNAL by the Statistical Office, H.M. Customs.

CAPPINGS OF COMB.

By L. S. C., Ilkley, Yorks.

"*A Queen-rearing Incident*" (*p.* 222).—It ought not to be difficult to diagnose such cases. The appearance of a bee which has not left its cell is very different from that of an adult. Every circumstance points to an imprisoned bee, but no mention is made of the consequently released queen. The normal thinning of the capping shows that a cocoon was spun. I should much like to see some of these cells and their occupants. The theory of accident does not fit perfectly with other systematically intelligent acts. But why was the bee in the cell long enough to be sealed? Had it retired to rest, or to die? Or was it the victim of some act of revenge, or huge practical joke? After all, what do we know of the real internal economy, the politics of the hive?

Bees in South Africa (*p.* 214).—"Unless a bee, or even an atom of the 'mighty atom,' has imagined that he has crossed an imaginary line, he is deemed an indigenous ass." Hello, down under there! One requires more than an atom of wit to follow such an imaginative flight as this. Would "Inyosi" kindly explain for the benefit of us up-over duller-witted ones, or are these to be passed over as merely imaginary lines?

The Condition of the Brood Nest (*p.* 222).—This note by our practical friend W. Woodley deserves re-perusal. The age of the sealed brood, as judged by the expert eye, is the key to the situation.

Pickled Brood (*p.* 223).—How does friend W. J. Farmer know this disease? He names it very definitely, but I doubt if accurately. It seems to me also to be misleading to say that pickled brood might develop into either chilled, or foul, or black brood. How could it do so? It is interesting to note that W. J. F. ever has any bees on the sick list, as one would naturally expect annual renewal of combs to keep them in a state of "chronic health"!

Racks or Crates? (*p.* 232).—Is not the word "crate" a misnomer which we might, with the kind consent of the manufacturers, cease to use? The derivation (Lat. crates) would seem to confine its use to wickerwork.*

Using Comb Foundation (*p.* 232). — To abolish foundation is an extreme and unwarranted interpretation. We cannot do without full sheets at times, but swarms hived upon starters, with drawn-out combs over the excluder, will give good results. One brood-comb to catch all the stray pollen is perhaps advantageous, but swarms are hived at a loss upon a full set of combs, as their instinct is to build, and the material is wasted.

[* We have for some years made efforts to do away with the "misnomer" mentioned, and but for the persistent misuse of the word "crate" for "rack" in the catalogues of some dealers it would have disappeared long ago. Most leading bee-appliance manufacturers now use the words rack and crate each in its proper place, *i.e.*, rack for the appliance in which sections are placed on the hive for filling, and crate when referring to the appliance in which comb in sections is crated for marketing or for transit. The B.B.K.A. distinctly mark the difference between rack and crate by requiring candidates for third-class certificates to explain—1st. What is a rack? 2nd. What is a crate? And we have not seldom—when conducting exams. on behalf of the Association — got the following replies in answer to the respective question:—"A rack is the crate in which sections are placed on a hive." Very well; now tell me what is a crate? "Well, a crate is, I suppose, a section-rack."—EDS.]

BEE-KEEPING IN RHODESIA.

The following extract from the *Rhodesian Agricultural Journal*, forwarded by a B.B.J. reader, shows that bee-keeping in that part of South Africa is now being started on up-to-date lines, and promises to become a feature of the agriculture of Rhodesia. The apiary of Mr. Muhlbauer, with which the article is illustrated, is well arranged, and shows modern frame-hives constructed on the best lines. We are sorry the illustration could not be reproduced in our pages along with the text which appears below.

Section honey from local hives is now to be found upon the Salisbury market, several farmers and horticulturists are busily employed in constructing appliances, and a Bee-keepers' Association is in the making. The flavour of "Umsasa Honey" has been a revelation to many.

From Bulawayo, Mr. Muhlbauer, who pioneered this industry, reports that he will have 100 hives in operation next season, and is in constant receipt of inquiries for swarms and apparatus. He is expecting a further consignment of Italian queens, which are stated by the vendors to be the finest ever exported from that country.

"Bee-keeping," he writes, "is slowly but surely working its way into the confidence of many a farmer. In answer to the growing demand. I have kept twenty-one swarms going, in spite of the severe drought experienced this season, and they are all doing well. There is a good chance for a fair honey-crop; but, of course, most of the honey will have to be devoted to giving the new Italians an early start. The queens will not be here before April, which will, however, leave plenty of time for organising work for next season. Last year's bees are only now (February) beginning to swarm, which proves how well they are adapting themselves to local conditions. In Mashonaland they had already swarmed in November, but the Eastern Province is natural bee-country, and the rains fall earlier than down here.

"As soon as our farmers realise the splendid chances they have in this direction, there is little doubt that Rhodesia will produce enough first-quality honey to not only supply the whole of South Africa, but also to capture a share of the home market, at present supplied almost entirely by America. I have already proved what can be done on a small scale, and on the basis of 100 hives will have a further opportunity of stating commercial possibilities at the end of next season. The projected Bee-keepers' Association, in the hands of Mr. Edmonds, whose results have already shown what energy can effect within a few months, should be a medium for further demonstrating that a new and profitable industry can here be created.

"The question is frequently put as to whether the domestication of the wild bee is feasible. The Matabele variety is too fond of swarming at frequent intervals, and

I know of one individual swarm that sent out sixteen smaller swarms within five weeks. The residue was a handful of bees, which were quite incapable of amassing honey. Moreover, the wild bees, even if kept in a modern hive, are easily irritated, and very dangerous to any living thing within a few hundred yards, showing a distinct partiality for horses and cattle. Crossed with Italian drones, they may give better results, but experiment in this direction had better be postponed until results can be compared with those secured from the imported bees.

"I shall be only too pleased to furnish furnish further information on any particular subject to intending bee-keepers."

Queries and Replies.

[3328.] *Returning Casts to Swarmed Hives.*—May I trouble you for advice on the following: My bees swarmed on May 28, after which I placed a rack of sections above brood-frames of parent hive. Twelve days later a cast issued from the same hive, which I put back again in the evening, and put queen-excluding zinc over the entrance. 1. Is this the right thing to do? 2. Is there any way of preventing the issue of "casts," my object being to obtain honey, not increase? 3. Why have the bees not commenced to work out the sections mentioned above? 4. Is the enclosed bee a young queen? I found it nearly dead with four or five workers round it, on the floorboard of the skep in which I placed the cast. Next morning, on going to the same hive, I found another dead queen. Please explain this. I send name and sign,—E. W. B., Norfolk, June 12.

Reply.—1. The best way we know of for preventing the re-issue of casts, is to keep the bees in hiving skep in a shady place till early next morning, and before the bees start work for the day. Then return the swarm, and it will be found that all surplus queens will be found dead on the ground outside the hive before sundown. 2. Only by cutting out all queen-cells save the ripest one, after the top swarm has issued. 3. Because the parent hive has been depleted of its bees, and in consequence surplus-room is not often required. 4. Yes, and it is quite common for several queens to issue with a cast or second swarm.

[3329.] *Utilising Queen from Robbed-out Stock.*—Herewith I send you two pieces of comb removed from a skep two days ago, the history of which, so far as I can gather is as follow:—Last autumn the hive was fairly full of bees and stores, it being an early "cast" of June 1905. However, in the early spring of this year it was attacked and almost cleaned out by robber bees; a subsequent examination showed that there were only about 200 bees left in the hive. It was not worth while trying to unite such a small number, so I cut out the combs and when doing so noticed a small patch of brood. I then saw the queen and she looks all right. What struck me most was that in several of the cells no fewer than five or six eggs were deposited. I had previously seen as many as three in one cell when a prolific queen had not sufficient bees to cover her brood, but nothing like this quantity of eggs in single cells. I put the queen in a nursery and laid it on top of a strong stock which is looking after her meantime. Now what I would like to ask is, 1. Do you think the queen worth preserving? I noticed that even after being put into the cage she was laying eggs, which the bees removed. 2. Will she be injured by being in a hive all the spring with so few bees, and in consequence, was she unable to fulfil her maternal duties? —D. M. P., Greenock.

Reply.—1. It would appear as if there had been a paucity of bees in the hive during the whole time since last autumn, and the number being gradually lessened since, the brood has suffered from lack of bees to cover it. 2. There is no foul-brood in comb, and in view of the plain signs of the queen's prolificness she is certainly worth using in some other stock It seems as if she had suffered no damage at all.

[3330.] *Dealing with Suspected Hives.*—I shall be grateful if you will tell me if the enclosed larvæ are diseased? I have nine stocks of bees, all very strong and apparently just ready to swarm. Unfortunately, however, certain slight, but unmistakable symptoms of foul brood recently appeared in one of the strongest colonies, and, in this case, with the aid of an expert friend, I made a swarm of the bees, and have destroyed brood, combs, and all other contents of the hive. Since doing so I have examined several of the other stocks, and find in each of them isolated instances of larvæ apparently standing on end in their cells, which I have removed, and enclose specimens. The larvæ, when removed, were mostly white and fresh, and free from any offensive smell. I examined three hives in addition to the one undoubtedly affected, and each contained a few of these doubtful-looking larvæ, but none showed and other symptoms of foul brood. It would be a sad pity if I had to destroy all the contents of these hives, as they are very strong and prosperous, but I do not wish to run any risks. Thanking you in anticipation. I send full name, and sign.—W. F. S., Weybridge, June 13.

Reply.—The imago bees sent show no trace of foul brood, and appear to have died from lack of warmth, after passing from the pupa stage. There is no reason why any of the stocks, now strong and doing well, should be disturbed at all, to say nothing of any such drastic measures as you fear being necessary.

[3331.] *Drone-breeding Queens.*—Thanking you for replies to past queries I am again troubling you by sending a queen removed from a stock, examined yesterday, in which five of the seven frames containing brood was nothing but drones. I have given the bees a ripe queen-cell for them to hatch out, and so I ask: 1. Have I done right in so doing? I put this question because early in the spring

having found one of my stocks queenless I united the bees to the stock mentioned above, which now seems very strong in bees, but there are a great deal too many drones among them; not only so, but all the sealed brood in combs seem to be drones. I have, therefore, removed the five frames mentioned and replaced them with full sheets of foundation, and will be glad to know. 2. If the queen sent is a drone-breeder, and have I done right in taking her away? 3. What variety of bee is the dead queen. 4. Can you tell me where I can obtain a pure black queen bee? I send name and sign, C.B.A. Aylesbury.

REPLY.—1. If you took the precaution of allowing time for the bees to discover the loss of their queen before inserting the queen-cell all may go on well, otherwise, the cell may be found torn open and the nurseling queen cast out. 2. The drone-brood in worker-cells prove the queen to be a worthless drone-breeder, but with regard to the wisdom of removing her, it depends on reply to first query. 3. The ordinary brown variety. 4. We cannot say where "pure black" queens may be had; indeed it is next to impossible to procure "pure black" bees now-a-days.

[3332.] *Brood-rearing in Supers.*—I am writing you for advice on the following:—I put a shallow frame into the body box of one of my hives to have comb built-out in it by the bees. When I came to examine the frame later on it was filled with comb and sealed brood in the cells. I therefore ask; 1. Should I leave this in the body-box? 2. Another frame of foundation was then put in to be drawn out. I removed it after thirty-six hours and hung it in a super over the body-box. The queen had laid eggs in this comb also. On examining the comb recently I found brood in all stages in the cells, some having been sealed over. There are also one or two sealed drone-cells. What would you advise me to do in this case? An answer in B.B.J., to which I am a regular subscriber, will oblige. Name, etc., sent for reference. "SLATER BEE," Pudsey, Yorks.

REPLY.—1. On no account, as the bees will build comb below the bottom bar of shallow frame. Remove the shallow frame into a suitable box and let the bees fill comb with honey after the brood has hatched out. 2. The same applies to second frame of comb. You should use excluder zinc to keep queens from entering shallow-frame supers.

[3333.] *Tall Sections.*—Will you kindly inform me where I can procure the tall sections 5 by $4\frac{1}{4}$ by $1\frac{5}{8}$? I have for the last five years worked with these side by side with $4\frac{1}{4}$ by $4\frac{1}{4}$ sections, and every year have secured 20 to 25 per cent. more honey and better finished sections in the deeper rack. The last 500 I had from our old friend J. H. Howard.—H. F. J., Clifton Down, Bristol.

REPLY.—Many of our leading dealers stock the tall section referred to; but as Jas. Lee and Son have succeeded to the late Mr. Howard's business, they would no doubt be able to supply them.

[3334.] *Queen Cast Out of Hive.*—I found the enclosed queen outside one of my hives this afternoon. Life was not quite extinct when I found her, a slight pulsating movement of the end of the abdomen being visible. Would you be so good as to tell me whether she is a virgin. The hive is headed by a last-year's queen, and I hope I am correct in my conjecture that this dead one is not the mother of the hive. Thanking you in anticipation.—G. S. N., Godstone, Surrey, June 16.

REPLY.—The queen bee sent, though not so matronly in appearance as is usual at this season, is either the mother-bee of the stock, or an adult queen that has by some means got into the hive, near which it was found. You could make certain by examining combs three or four days after queen was cast out for eggs or just-hatched larvæ.

[3335.] *Using Shallow-Frames for Brood-Chambers.*—Referring to your reply to my query, No. 3310 (page 224), I have evidently not made myself plain. For the second brood-chamber used in doubling I employed a shallow-frame box containing shallow-frames fitted with brood foundation; the top brood-box, therefore, has no excluder underneath it, and the queen is now filling it with brood. But the frames above are attached by brace-combs to the top-bars of those in the bottom brood-box; so that they are difficult to get out. I propose to add two more boxes of shallow-frames, and, of course, shall use excluder under these; but should like to know how to prevent comb being built between upper and lower brood nests. I am sorry to trouble you a second time about the same matter.—E. C. S., Leeds.

REPLY.—1. The term "doubling" applies only to the use of a second chamber similar in size to the body-box below, and, of course, holding standard frames. As put in your query, on page 224, the so-called "doubling" was merely increasing the size of brood-chamber by adding a box of shallow-frames, to which the queen had free access, and when the space between tops of frames in body-box and the bottom-bars of the shallow-frames above was much over the regulation distance ($\frac{1}{4}$ inch), brace-combs were sure to be built. They are, of course, a nuisance, which can only be got rid of by cutting them away, and reducing the space in the handiest way that suggests itself. A thin board, with slots cut in it, laid on top-bars of brood-chamber, would, no doubt, answer the purpose.

[3336.] *Worker Bees found in Queen-Cells.*—I send herewith three boxes marked A, B, and C respectively, and will be obliged if you will reply to the following questions regarding the contents of each. 1. The queen-cell in A had in it the two bees in the same box; are they both workers? 2. B has in it a bee taken from another queen-cell; is this a queen-bee or a worker? It was alive when removed from the cell, and may be when it reaches you. 3. Is the queen enclosed in C fully grown? I took it out of a cell myself by removing the cell-cap. She was alive when released. I send name for reference.—S. E., Sandhurst, Kent.

REPLY.—1. Both bees are fully developed workers, used to foraging, no doubt, and would have been "foraging" in the cell after the royal jelly, seen at bottom thereof, when

they got shut in by the other bees. 2. The bee in question (a worker) was alive and well when box was opened. 3. Yes; the queen was fully developed, and would have been all right if left in the hive after being released.

[3537.] *Increasing Stocks by Beginners.*—Being a constant reader of the B.B.J., I should be glad to know if it is right and safe to remove a frame containing a queen-cell to another empty hive, and so form the nucleus of another colony? Will the bees forsake the comb and the hatching queen? I am wanting to increase my hives, and fear I may not be at hand when the bees swarm, which I expect they will be doing before long. I should be grateful for your advice as to what is the best to do? I send name, etc., and sign.—A. E. L., Malling.

REPLY.—You cannot raise another stock in the way mentioned, for the flying bees would all return to the hive from which the comb with queen-cell was removed, leaving the queen-cell behind deserted. If you intend to increase your stocks of bees and to manage them well you should procure a "Guide Book on Bees," without which no beginner can expect to succeed in bee-keeping.

Echoes from the Hive.

Whittlesford, Cambs, June 14. — Bees now working merrily, but nights are a bit cold, and this tends to check the honey-flow; but it will all be right now that weather is getting warmer. We are looking for a good season in this district.—H. J. WISBEY.

Icklesham, S.O., Rye, Sussex, June 18.—Yesterday was the first ideal bee-day that we have had in this district for some time. We have had plenty of bee-forage, but the north wind has been with us continually; therefore, everything is backward, and I am afraid that a large portion of the worker bees have sallied forth in search of honey never to return. The field-beans are, however, now in splendid bloom, and honey is plentiful. Two of my hives are each supered with crates of shallow-frames, and the twenty frames in each hive are crowded with bees. Hives with sections on are also doing so well that by end of the present week I shall give those hives which need it just one more surplus-chamber. White clover will be in bloom here in about ten days.—HENRY CLARKE.

FORMIC ACID.

FOR MUSCULAR TREMBLING.

Formic acid has proved a valuable remedy in the treatment of muscular trembling due to atony. In the case of two patients who were unable to raise a glass of liquid with one hand without spilling the contents, the administration of the acid gave marked relief in two days, although the affection was of ten to eighteen years' endurance. At the time of the report, the trembling had not entirely disappeared, but the patients could lift a glassful of liquid with ease. These results suggest that possibly the remedy might be of service in the treatment of chorea.—E. Clément (*Comp. Rend.*, 1905, 140, 1,198).—*The Pharmaceutical Journal.*

Bee Shows to Come.

A nominal charge of 2s. 6d. is made for notices (not exceeding 7 lines) in this column, 10 lines charged 3s. 6d., up to 15 lines 5s., which covers cost of insertion from order till date of show. Cash should accompany orders for insertion.

June 27 to 30, at Derby.—Royal Agricultural Society's Show. Bee and Honey Section under the management of the B.B.K.A.

July 18, at Ashby-de-la-Zouch, Leicestershire.—Show of Bees, Honey, and Appliances, in connection with Annual Flower Show. Three open and two local classes, and one L.B.K.A. Bee demonstrations. Schedules from J. H. Dunmore, Secretary, Alandale, Ashby-de-la-Zouch. **Entries Close July 16.**

July 19 and 20, at Gainsborough.—Show of Honey, Hives, and Bee Appliances in connection with the Lincs Agricultural Society. Bee Department under management of the Lincs B.K.A. Fourteen classes. Liberal money prizes and silver medals. Schedules from R. Godson, Hon. Sec., Lincs B.K.A., Tothill, Alford, Lincs. **Entries closed.**

July 25 and 26, at Cardiff.—Annual Show of the Glamorgan B.K.A. in connection with that of the Cardiff and County Horticultural Society. Honey, Wax, Appliances, etc. Classes for members, novices. Five open classes, with prizes for sections and Bee-appliances, 30s., 15s. Entry fee for one or more of the open classes to non-members, 2s. 6d. Schedules from Wm. Richards, Hon. Secretary, The Red House, Gabalfa, Cardiff. **Entries close July 20.**

August 1, at Henbury, near Bristol.—Annual Show of Honey and Wax, of the Henbury District Beekeepers' Association, with bee lectures, by the County Council's expert, in connection with the Horticultural Society's Exhibition. Several open classes, with good prizes (two classes with free entry). Schedules from the Hon. Sec., J. Atkin Waller, Pen Park, Westbury-on-Trym, Bristol. **Entries close July 25.**

August 29, at Chester.—Cheshire B.K.A. Show in connection with the County Agricultural Society. Open classes for Hives, Observatory Hives, Sections, and Extracted Honey. Baroness Burdett-Coutts' prize hive for best exhibit shown by cottager member. Seven classes for members. Schedules from T. A. Beckett, St. Werburgh Chambers, Chester. **Entries Close August 8,** or at double fees, **August 15.**

August 8 to 10, at Middlesbrough.—Show of Honey, etc., in connection with the Royal Yorkshire Agricultural Society. Schedules and form of entry from John Maughan, Secretary, Blake street, York. **Entries close June 30.**

August 8, at Clevedon, Somerset, in connection with the Horticultural Show.—The Somerset B.K.A. will hold its first annual Honey Show as above. Several open classes. Schedules from Louis E. Snelgrove, Hon. Sec., Cromla, Locking Road, Weston-super-Mare. **Entries close July 21.**

August 9, at Kingsthorpe.—Honey Show of the Northants B.K.A., in connection with the Horticultural Society's Exhibition. Special prizes, including the Baroness Burdett Coutts' prize hive for cottager members, also three open classes, including one for

single 1-lb. jar honey. (**Entry free.**) Prizes, 20s., 10s., 7s. 6d., and 2s. 6d. Schedules from R. Hefford, Hon. Sec., Kingsthorpe, Northants. **Entries close July 15.**

August 9, at Madresfield, Malvern. — Annual Show of the Worcestershire Bee-keepers' Association. **Open class.** Schedules from Mr. Geo. Richings, 2, Shrubbery Terrace, Worcester.

August 16, at Yetminster, Dorset. — Annual Show of the Yetminster and District B.K.A. held in a field kindly lent by Mr. Jolliffe. Four open classes, including three 1-lb. jars extracted honey, three 1-lb. sections, and cake of beeswax. Schedules from G. Leeding, Hon. Sec., Bradford Abbas, Sherborne. **Entries close August 10.**

August 30, at Montgomery.—Honey Show in connection with Horticultural Exhibition. Two open classes for six 1-lb. sections and six 1-lb. jars extracted honey, 21s., 10s. 6d., 5s., in each class. extracted honey. Prizes, 10s., 5s., 2s. 6d. Entry fee, 1s. each class. Schedules from Mr. W. J. Jones, Secretary, Montgomery. **Entries close August 23.**

September 8, at Dumfries.—South of Scotland B.K.A. 14th Annual Show of Honey, Bees, and Appliances. Five open classes—viz., three 1-lb. jars, three 1-lb. sections, and for single jar and section (free entry), and cake of wax; also handsome money prizes and valuable medals, for members only. Schedules from Jas. Johnstone, Sec., Nelson Street, Maxwelltown. **Entries close September 1.**

September 13, at Castle Douglas.—Honey Section, Dairy Show. Liberal prizes. Five open classes—viz., three 1-lb. jars, three 1-lb. sections, single jar, single section, and for cake of beeswax. Schedule from Jas. Johnstone, or from L. Aird, Hardgate Schoolhouse, Dalbeattie. **Entries close September 1.**

Notices to Correspondents & Inquirers

Letters or queries asking for addresses of manufacturers or correspondents, or where appliances can be purchased, or replies giving such information, can only be inserted as advertisements. The space devoted to letters, queries, and replies is meant for the general good of bee-keepers, and not for advertisements. We wish our correspondents to bear in mind that, as it is necessary for us to go to press in advance of the date of issue, queries cannot always be replied to in the issue immediately following the receipt of their communication

G. B. (Sutton-on-Trent).—Recipes in "Guide Book."—1. No. 10 (page 168) is, as stated, for painting hives and for preparing carbolised cloths used in quieting bees. We do not know what "directions on the bottle" you refer to. No. 9 is used for another purpose; besides, soluble phenyle is quite different from *phenol* (carbolic acid). 2. There is no need to use recipe No. 10 on a new hive that has never been occupied by bees. 3. It is not advisable to put bees into a hive on which solution No. 10 has been used till the strong odour of carbolic acid has passed away. Otherwise the bees may leave the hive and decamp.

(Mrs.) D. E. W. (Sussex).—Swarms Deserting Frame-Hives.—1. It occasionally happens that a top swarm hived in a skep will—several weeks after hiving—send out what is termed a "virgin swarm." But in your case only about ten days elapsed before the second swarming took place. We advise you to examine the combs and see if the bees have not deserted the hive for some reason. 2. The information you ask for regarding experts' certificates can only be had from Mr. E. H. Young, Secretary, B.B.K.A., 12, Hanover Square, as there is now no county association for Sussex.

W. H. P. (Totland Bay, I.W.).—Mr. W. H. Bellairs, Bransgore, Christchurch, is hon. sec. of the Hants and Isle of Wight B.K.A., and will, no doubt, give you all information regarding membership.

J. B. (Eastleight, Southampton).—Swarms Returning.—When swarms return to the parent hive, as in your case, it is generally understood that the parent queen has either fallen to the ground and got lost, or did not leave the hive with the swarm. In the latter case the bees will probably swarm again in a few days, but if the queen was lost the young queens from cells prepared before the swarm came off will hatch, and one of them will head the colony after killing off the others.

G. C. (Sheffield).—Full Sheets versus Only "Starters."—The par. quoted on page 212 simply gives the results of experiments made by Mr. W. Z. Hutchinson, a noted American bee-keeper, who is, we may be quite sure, well up in the subject he writes about. You may therefore rely upon the statement as being correct.

"Wag" (Braintree).—Buying Swarms.—We never recommend one particular advertiser in preference to another. To do so would be obviously unjust to others. You will see swarms in plenty advertised every week, and distance away is no great disadvantage if swarms are properly packed for travelling.

Z. Mather (Barmouth).—Dates of Shows.—You will find particulars in every week's issue of our journals.

W. H. C. (S. Devon).—Honey Boards.—1. The appliance so named is used in America for giving a bee-space between frames and surplus-chambers. They are fitted with excluder zinc to keep queens from entering supers. 2. The Rymer honey board has been fully described in our pages by Mr. Rymer himself.

H. B. (Kirby).—Treating Suspected Stocks.—1. There is no reason why you should "lose a large quantity of bees," as stated, when treating them on the starving method for curing foul brood. If dealt with according to directions in "Guide Book" very few bees are lost. 2. If the stocks are strong now we should certainly defer any contemplated operations till the honey-flow is over.

Suspected Combs.

M. W. F. (Middlesex).—As the stock is weak and some of the sealed brood is suspicious we do not think the colony is worth saving. It could certainly do no good this summer, and time thus spent on the bees would be wasted, if not worse.

E. R. B. (Croydon), H. B. (Leicester), E. A. Long (Bournemouth), and J. W. P. (Chor-

ley).—Samples sent are all affected with foul brood, the last-named being a very bad case. Others less so.

L. B. (Middlesex).—There is foul brood of very pronounced type in comb sent, and we are unable to understand an expert passing the stock from which sample was taken as healthy.

Enquirer (Suffolk).—There is foul brood in comb sent, though we should expect the colony to be strong, judging by the hatching brood and healthy looking larvæ in cells. If our idea is correct the bees may be dealt with as directed on page 152 of the "Guide Book."

HICKLING (Basildon).—The stock is diseased, and, being weak in bees it should be destroyed as worse than useless.

J. G. N. (Cumberland).—We cannot undertake to diagnose cases of foul brood from small splashes of dried-up matter sent on bits of broken glass for examination.

E. E. S. (Essex).—The cell cut from comb is a half-formed queen-cell, showing that the stock is either queenless or preparing to swarm.

"Expectant" (Oxon.).—Though sample is not large enough to judge from without use of microscope, we see enough to prove that foul brood is just breaking out in comb. We should, therefore, remove super, as proposed, and deal with the case as directed in "Guide Book."

*** We have received several letters from correspondents desiring to obtain the address of the farmer mentioned on page 233 by "Amateur, Cheltenham," to whom they have been forwarded.

Special Prepaid Advertisments.

Twelve words and under Sixpence: for every additional Three words or under, One Penny.

Advertisements for current issue must be received by first post on Tuesday.

BEES FOR SALE. BARGAIN.—Strong, healthy Stocks, in well-made modern hives, each on ten frames, with super and lift complete. Price 25s. each, or £3 10s. three.—RANGER, 39, Beulah Road, Tunbridge Wells.

QUEENS.—Select 1906, laying.—WORCESTERSHIRE BEE-KEEPERS' CO-OPERATIVE SOCIETY, LTD., Worcester. Q 61

COMFORTABLE APARTMENTS for Brother Bee-keepers visiting Douglas. Terms: Tea, bed, and breakfast, 3s. 6d; or full board, 5s. per day.—MORSLEY'S, Merridale House, top of Castle Drive, Douglas, Isle of Man.

AN ENGLISH BEE-KEEPER, of wide experience, seeks an ENGAGEMENT in a warmer climate.—Address "APICULTURE," "B.B.J." Office.

WANTED, SECTIONS, first quality; prompt cash; also extracted per cwts.—W. CHILTON, Brookside, Polegate, Sussex.

EXTRACTOR FOR SALE, take 2-bar frames, 7s.—G. LEDGER, Sandhurst, Camberley. Q 60

LADY'S BEEHIVE, six squares, with honey box and glass slides, 9s. 6d.—G. LEDGER, Sandhurst, Camberley. Q 59

29TH YEAR.—Queens: Imported Italians, 6s. 6d.: home-raised Italians and Carniolans, 5s. 6d.: British, 4s. 6d. each. Also Swarms and Nuclei.—F. WOODHAM, Clavering, Newport, Essex. Q58

OFFERS WANTED FOR BEES, in ten Standard Frame Hive. Guaranteed healthy. — Apply BUXTON, East Bergholt, Suffolk. Q 57

HEALTHY NATURAL SWARMS, 12s. 6d. each.—R. CARTER, Chartrisgo Green Farm, Chesham, Bucks. Q 56

PURE HEATHER guaranteed sample dozen sections. View to further supply coming season.—BURN, R.O., Whitby. Q 54

NEW SEASON'S LIGHT EXTRACTED HONEY, 52s. 6d. per cwt., in cwt. cans; not less than three cwt. supplied. Samples 3d.—CHARLES H. BOCOCK, Ashley Apiaries, Newmarket. Q 52

SIX STRONG STOCKS OF BEES with hives, on ten frames; three last year's and three this year's Queens, guaranteed healthy, £8 lot, or would sell separately.—J. ADDYMAN, Charlestown, Baildon, Yorks. Q 51

WORTH A GUINEA A HIVE.—"Never Swarm System," 3½d., free. "Never Swarm" Hives, best, most complete made, 22s. 6d.—HARRIS, Wavendon, Bucks. Q 49

100 STANDARD SHALLOW FRAMES, clean, extracted combs, guaranteed healthy, 6d. each.—HARRIS, Wavendon, Bletchley, Bucks. Q 50

FOR SALE, 120lb. WHITE GRANULATED HONEY, in screw cap jars.—S. A. FULLER, Martham, Great Yarmouth. Q 48

7S. 6d. HIVES. 7s. 6d.—The Bee-keeper's Opportunity. Standard size, with super complete, painted. Illustration sent. — OXONE APIARY, Trimingham, Norfolk. Q 47

TILLEY'S PATENT ("Won't Leak") SECTIONS, sample 6d., post paid. Complete Super, 3s. 6d., on rail.—J. T. GODWIN, Agent, Dorchester. Q 46

GOOD HONEY EXTRACTOR, not geared, half price, 12s. 6d.; bought larger one.—GEO. ESSAM, Woodford, Thrapston. Q 45

WANTED, 1-lb. SECTIONS NEW HONEY.—Price and particulars to T. G. TICKLER, Pasture Street, Grimsby. Q 44

SPECIAL OFFER.—New American Hives, ten Langstroth frames, body box of 1in. pine, dovetailed, super cover, zinc roof and floorboard, will last a lifetime, 3s. 6d. each, complete; delivery by return.—JAMES HILLMAN, Regent Street, Stonehouse, Glos.

FOR SALE, FIVE very strong STOCKS, in nearly new "W.B.C." Hives, price 30s. each. Also quantity of spare hives, etc.—MASON, 19, Wynell Road, Forest Hill, S.E. Q 42

FOUR STRONG HEALTHY STOCKS, in second season hives, with section racks, dividers, and foundation, four shallow crates, with frames and foundation. What offers? Must sell.—BERES, 19, Pewsance Street, West Hartlepool. Q39

WANTED, a YOUNG MAN, as GARDENER (no glass), who has a knowledge of bee-keeping preferred.—Particulars to C. H. HAYNES, Hanley Castle, Worcester. Q 56

STRONG SWARMS, 1905 Queen, 12s. 6d., 13s. 6d. Three Frame Stocks, 1906 fertile Queen, 12s. 6d. Guaranteed healthy; 1906 fertile Queens, 5s. Stocks in skeps, 1906 Queen, 12s. 6d. and 13s. 6d.—W. WOODS, Normandy, Guildford. Q 37

NOW READY, NATURAL SWARMS of my hardy prolific strain English Bees, not less than 4 lbs., 12s. 6d.; 5 lbs., 15s.; 6 lbs., 18s. Guaranteed healthy and safe arrival. Packages to be returned.—WHITING, Valley Apiaries, Hundon, Suffolk. Q 33

Editorial, Notices, &c.

BRITISHBEE-KEEPERS' ASSOCIATION

The monthly meeting of the Council was held on Thursday, June 21, at 105 Jermyn Street, S.W., Mr. T. I. Weston occupying the chair. There were also present Dr. Elliot, Messrs. R. T. Andrews, F. J. Bernau, W. B. Broughton Carr, W. F. Reid, and the Secretary.

Letters explaining enforced absence were read from Mr. T. W. Cowan, Mr. W. H. Harris, Mr. J. B. Lamb, Mr. G. H. Morrell, Mr. A. G. Pugh, and Mr. E. Walker.

The minutes of the previous meeting were read and confirmed.

Mr. Q. Aird, of Hardgate School House, Dalbeattie, N.B., was duly elected a member of the Association.

The Finance Committee's report was presented by Dr. Elliot. It gave full details of receipts and expenditure to date, and was approved.

The Examiner's report upon the late examination of first-class certificates was received. After full consideration it was resolved to award diplomas to candidates Nos. 1, 2, 4, and 8.

Third-class certificates were also awarded to Messrs. Q. Aird, C. N. Craik, and David Young.

A number of appointments of judges and examiners were made to officiate at fixtures in Berkshire, Devonshire, Huntingdonshire, Norfolk, Kent, Warwickshire, and Worcestershire.

The Secretary presented a report on the arrangements for the "Royal" Show at Derby, which was considered favourably and duly approved.

Several suggestions having been received in regard to an alteration of date for commencing the Society's Insurance Policy now in force from August 1 to July 31, it was resolved to invite—through the medium of the B.B.J.—the wishes of the various affiliated associations on the question whether an alteration of date is desired, and, if so, for what reasons.

The next meeting of the Council will be held on Thursday, July 19.

NOTICE.

The administration of the *Société Centrale d'Apiculture* ask to be excused for not issuing the numbers of *l'Apiculteur* for May and June in time to be of service. The delay is due to the strike in the printing trade, which commenced when the May number was being set up, and is not yet ended. The two numbers will be united and issued together.

NORTHANTS B.K.A.

ANNUAL SHOW. SPECIAL NOTICE.

The Kingthorpe Horticultural Society having failed, and there being no other flower show held at a convenient date or place for the majority of our members, application was made to the Corporation of Northampton, and the Northants B.K.A. have received permission for the show to be held in a fine, large, light room in the Museum, Abington Park. The bee-tent will be near at hand in the park, and no charge made for admission to park or show. — ROB HEFFORD, sec., Northants B.K.A.

ESSEX AND SUFFOLK B.K.A.

SHOW AT BRENTFORD.

The above Association held a very successful exhibition of appliances (kindly lent by Messrs. Jas. Lee and Son) at the annual show of the Essex Agricultural Society, held at Brentwood on June 13 and 14. There was also an instructive exhibit of articles of interest to bee-keepers in particular and the public in general. Mr. Wm. Herrod, chief expert and lecturer of the B.B.K.A., gave a series of excellent lectures and demonstrations in the bee tent, which were very well attended and highly appreciated, resulting in a substantial increase of members to the Association.—G. R. ALDER, sec. and treas., Essex and Suffolk B.K.A.

BERKS B.K.A. (WINDSOR BRANCH).

HONEY SHOW AT WINDSOR.

The Windsor branch of the Berks B.K.A. intend holding a honey show in the ancient Town Hall at Windsor on August 6 (Bank Holiday).

The classes will be open to the members of the Windsor district only, and the committee hope by this means to create more interest among local bee-keepers and the general public.

Mrs. Darby, the hon. secretary is working hard to make this, "her first show," a great success.—(*Communicated.*)

ADVICE ABOUT EXAMINATIONS.

BY AN EXAMINER OF WIDE EXPERIENCE.

The remarks I am about to make on this subject relate, in the first paper, to examinations in general, and, in the second, specially to those conducted by the B.B.K.A. It is my purpose, on the one hand, to help those who intend, with good prospects of success, to enter for any written tests of their competence, and on the other, to deter those who are unfit for such trials of their knowledge from the expense and failures to which they may

expose themselves. I write with an experience of more than thirty years as an examiner in a good many departments.

1.—While sound knowledge of any subject presented for examination is essential, it is not in itself sufficient. The first part of this statement is worthy of close attention. The second part will be elucidated in subsequent divisions of our topic.

I have said "sound knowledge is essential." Many candidates gain scraps of information, and imagine that one or more of these is certain to do for answers to questions, and several together may suffice for "a pass." Herein lies a very common source of failure. "Sound knowledge" implies connected information — a fairly wide survey of some aspects of a subject, and an appreciation of details as these constitute a whole. Again, it should be remembered that where a practical acquaintance with a subject is expected, it is most unwise to depend on mere book-knowledge. This is especially the case in modern times, since examinations tend more and more to the probing of "sound" and efficient knowledge.

2.—A candidate must have the power of expressing what is known by him or her on any point, and this at the time when the possession of the requisite knowledge has to be shown. Nothing is more common among examinees than such sayings as, "I knew the answer to such and such a question, but did not see how to write it out satisfactorily"; or, "I was thoroughly well up on such and such a point, but at the moment I could not, for the life of me, think of the right answer." Now it must be remembered that, however satisfactory to the individual the real possession of information may be, it is useless to other people unless it can be clearly conveyed to them at the appropriate time, and without undue hesitation or circumlocution. This leads to our next point—an important one.

3.—Answers should be well arranged as to principles and facts, and should be concise in expression. For securing the first of these requisites it is well worth while for a candidate to spend some minutes in thinking out and sketching an outline of what is going to be written; and for the second, so to study the questions set as to have clearly before the mind exactly what is asked. Not only will valuable time be thus rescued from diffuse and useless expenditure, but the ability shown by clearness and conciseness will tell very favourably on the estimation of a candidate's powers. It constantly happens that abundance of knowledge leads to such unnecessary detail as quite uselessly consumes precious minutes and much space. On the other hand, attempts are often made to cover up ignorance by a multitude of words or by a diffuse style.

4.—Candidates must not invent questions of their own, and proceed to answer these at greater or less length. There is a well-known story of a youth who had, as he thought with clever expectancy, got up by heart a list of the kings of Israel and Judah. In his Scripture paper, however, the nearest question he could discover to what he had hoped for was "Give a list of the minor Prophets." To this he made answer, "It does not become us to draw invidious distinctions among the Prophets. I will, therefore, instead, give a list of the kings of Israel and Judah." It is easy to understand the fate met with at the hands of the examiner. And yet cases really analogous are constantly discovered, even in papers sent up by candidates at B.B.K.A. examinations. It is, or ought to be, unnecessary to say that time and trouble spent in such ways are not only mis-spent, but produce decidedly unfavourable impressions on the minds of examiners.

5.—For incomplete answers or unfinished papers no such excuses should be made as "Time up"; "Have you read up this particular part of the subject"; "Did not expect to be asked this question"; "The correct answer has unfortunately slipped out of my memory." If unnecessary or too exhaustive work has been attempted under particular questions, the examiners are sure to see this for themselves, and to pay due regard to the fact. In certain cases a brief outline of what could be said on any point may possibly suffice to show there is some validity in the plea "Time up." As to the other excuses, any reasonable candidate will see that it would be impossible for any weight—in the matter of marks—to be given to them.

Such, very briefly put, are some general considerations applicable to all examinations. In a second paper more specific reference will be made to the tests applied to candidates for certificates of expertship from the B.B.K.A.

Correspondence.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

AMONG THE BEES.

A CHAT ABOUT SECTIONS.—PART II.

[6341.] The honey house should have a bench or table of a suitable height for placing racks on to remove sections, and a

press or cupboard with a range of shelves on which to place honey, in sections not more than two deep. It should be mouse proof and bee proof, and a swing window is a great advantage, because by simply turning all bees can be quietly evicted.

In clearing sections, lay three blocks, about 2in. by 2in. by 13in. long, in such a position that they will come between the slats of rack. After removing the "follower," bring a little pressure to bear and the sections will stand out clear, when they can be easily caught two at a time, between the forefinger and thumb. This makes an expeditious job, and prevents any poking of fingers into the honey, or breaking any of them by forcible pulling out.

In scraping sections I prefer an ordinary table knife, fairly sharp. Run this smartly over each successive side, handling as little as possible. Be sure you remove every particle of brace-comb and propolis, and be careful not to leave any thumb-marks on the wood. I don't like sand-papering, as some of the powdery dust generated is almost certain to taint the honey. Have a basin of clean cold water and towel near at hand, and use them frequently.

Return the sections into storing crates, or the racks used in the hives, piling them up to any height, making certain, however, that the weight of each successive tier rests on the case and not on the sections. They are best left fairly open with a free circulation of air, because this helps to ripen and improve the quality of the honey. A fairly high temperature also aids in securing the same object. When circumstances prevent this mode of storing place them on the shelves of a cupboard, if available, putting not more than one row of sections above the first.

Seek a market for your honey; don't let it seek you. When regular customers have been secured, a circular sent them intimating that you have honey on hand of a certain class at a given price is, I find, sufficient to bring orders. If a good grade of honey, in well-filled sections, at a fair price is offered, the sale has a natural tendency to increase as the years go by, but it depends greatly on selling only a good article. Last year with a good crop I could have sold three times the amount I harvested.

In grading sections as they are being scraped, the eye—aided by the hand—is gradually educated to consign only those weighing 16 oz., and with good finish and even sealing, to the pile where first-grade honey is placed. As a rule only these should be offered on the market.

Unfinished sections should be returned to the hives early in the season for completion, and it is best to return them when they make up an entire rack, to the strongest colonies. At the end of the season all of this class should be cleared of honey, either by the extractor or the bees, then carefully wrapped up and well preserved for bait sections the following year. All racks used early in the season have one or two of these placed in the centre to tempt bees up into supers.

Light-weight sections weighing under 15½ oz. should be placed aside as second class, and to them should be added any with broken sealing, from whatever cause, any with rough irregular surface, or any otherwise defective. All these should be used at home, given as presents to friends, or sold locally at a reduced figure. Second grade sections placed in that category, either from want of finish or weight, should never be mixed with first grade.

The art of packing sections is easily acquired. As orders come in, secure grocers' empties, and select according to size of order. Place five or six sections side by side, first covering them with waxed paper. Pack in brown paper parcel, tying it lengthwise very tightly with fairly strong twine, so that it assumes the form of a solid brick. Thus packed, they come out on the grocer's counter fresh as when they came off the hive—an utter necessity if we are to make a full success of comb-honey. After sections have stood in the storing crates for some time, place them in a warm, dry cupboard, protected from dust and damp. A press near the kitchen fire suits best, as it will be warm and dry there. Sections now being taken from such a storehouse are as fresh as they were in August, and as yet they show no signs of granulation where well sealed. Whole sheets of foundation only should be used in sections if the bee-keeper is to expect the best class of work. Every sheet must hang true, and must not slant, bulge, or sag. They are best cut a little short of touching the wood, to allow of slight stretching.

Too many sections should not be given to a colony at one time. A strong colony makes the best finish and yields the finest sections, every one full weight. A good flow aids, also a high temperature, and rapid storing. A swarm makes the finest finish, and, as a rule, the finest grade of sections. Black bees finish off comb honey most perfectly, and their capping especially is the finest. Glazing sections is a costly and tedious job, but for those with the time and patience it may pay where there is a demand for a gilt-edged article. For the large grocer who handles extensively, the trouble is, however, thrown away. Something neat, cheap, and effective is all he desires, and this is found in the sheets of waxed paper cut to size re-

quired, first introduced, I think, by Messrs. Abbott Bros., Dublin. It is quite efficient, easily applied, cheap, and being semi-transparent the contents may be seen at a glance. Any dealer in bee-appliances will supply them about 4s. per 1,000.—D. M. M., Banff.

PRICE OF THIS SEASON'S HONEY.

[6342.] I must say that I agree with the remarks with regard to the above expressed on page 243, because it seems to me that when honey is offered almost before the season begins at a low price, it gives a wrong impression to dealers, grocers, confectionery, etc., who imagine that honey is excessively plentiful, and is likely to be cheap. This is quite an erroneous idea, because nobody can say until the season is over, and reports have been received from different districts stating whether the honey-flow on the whole has been good or not.

My experience is that bee-keepers may be doing well in one district, whilst only a few miles further on no surplus honey is being gathered at all! I know that last year scarcely any surplus honey was secured around this town, whereas a friend living on the Cotswold Hills near here told me that his hives produced an average of 55 lb. each. It seems to me that a depôt is needed in some central spot where honey could be collected, and a fair price paid to small bee-keepers.

Such men often rush their produce into market in order to make a little ready money, and they accept almost any price offered from ignorance of the state of the supply and of the future demand for it. I recollect a few years ago a man advertising for fifty tons of comb honey offered me 6d. per 1-lb. section, carriage paid, to his works! A price like this daunts bee-keepers, and astonishes them, when they notice that 1-lb. sections are marked in shop windows at from 10d. to 1s. each. I imagine that no bee-keeper desires an extravagant price for his produce, because this tends to make the article unpopular.

For my own part, I should be always quite satisfied if I could average 8d. per lb. into pocket for my honey, at which figure, I suppose, the consumer should be able to obtain it at 10d. I have just made a wax-extractor on the pattern mentioned on page 397, B.B.J., October 5, 1905, and I find it a complete success. Its great merit is its economy of working, because it may be placed in the kitchen oven whenever the oven, which is always warm, is not wanted for roasting purposes. Thus the extractor does not require extra coal to heat it. I also made a sun-extractor last year from a description given in the B.B.J., and this works very well too. I send name, etc., and sign—AMATEUR, Cheltenham, June 25.

[6343.] I think all British bee-keepers who really have a desire for "fair trade and no favour" ought to thank Messrs. Tharp and Jones for their letter in your issue of June 21 (page 243). As a bee-keeper, I was even thinking of writing to the "B.B.J." myself and asking why Oxfordshire should not be styled "the land of milk and honey," seeing that "large quantities" of the latter were advertised from thence even so early as May 31. But, be that as it may, I must say that lately, on again reading of "Finest Scotch" at less than 3½d. per lb., and other wonderful cheap products, I have been reminded of the proverbial teetotaller who stirred ginger into his pint of "home-brewed," and then eased his conscience by calling it "ginger-beer." My own opinion is that those who really require pure English honey, and are willing to pay for same, this year should expect prices to rule quite as high, if not higher, than last season, seeing how the facts concerning the American food frauds (including honey) are being brought before the public eye. I enclose a Press cutting on this subject from the *Daily Mail*.—APIS MELLIFICA.

[6344.] I see in this week's B.B.J. an advertisement of this season's pure Oxfordshire honey at 5½d. per lb. I think we are getting very close to the "best Scotch honey" at extraordinary low prices, which occupied space in your pages for so long. I should suppose the reverend advertiser keeps his bees for pleasure only, and cares nothing for profit, as I am sure his parishioners would not sell their garden produce at such low prices and have any profit for their homes and children. I write this as a slight protest, as I think the price affects all cottager bee-keepers.—GEORGE DOW, St. Mary Cray Kent.

ROSS-SHIRE BEE NOTES.

[6345.] The so-called merrie month, after beginning, continuing, and ending with rather more than its usual severity, has been succeeded by glorious weather. The prophets made a good hit in predicting a reversal of weather conditions with the arrival of June. It is to be hoped that the same rule will not apply to the coming month, however.

The bare mention of a tearful July is calculated to bring anguish to the hearts of Northern bee-men.

Although bees are busy in the supers, the real honey-flow is still before us, and

stocks are in excellent shape to make the most of things. A stock of White Star bees is easily first. Two supers were left on over winter, and, on making the first examination yesterday, I found the top one solid with honey, the second almost solid with brood, and the hive so overcrowded that, with space equal to forty standard frames, bees were clustering out. A third super was given between the other two.

Apropos of the latest accusation hurled at the devoted heads of Italian bees—to wit, their alleged abnormal development of the "sugar tooth"—I may say that this particular stock required no feeding whatever, having all along abundant stores, while others with the usual number of combs were bordering on the starvation line.

Last year's crop is practically cleared, so new honey should sell freely. Here is something for those who rush their honey off at any price. A dealer who bought my last parcel of comb-honey kept it in a suitable place over winter, and is now selling at 1s. 3d. per section, thus netting 50 per cent. profit. Quality, he tells me, is still perfect—not a single granulated cell.

I may mention that the honey was stored in tall sections, and its keeping in good condition for close on a twelvemonth may perhaps be credited to being better ripened in the thinner combs. What does the Rev. Mr. Lamb say? — J. M. Ellis, Ussie Valley, June 23.

THE SEASON IN HAMPSHIRE.

BEES DOING WELL.

[6346.] The bees have had a glorious time of it during the past fortnight, making a very noticeable change in the condition of even the weak stocks. Those bee-keepers who have the ten frames "crammed" with brood and shallow-frames on will make a good haul. Where this is not the case the brood-combs are being filled with honey, and even small nuclei are filling their combs, the anxiety of the bees appearing to be to get the honey and "put it in somewhere."

The honey is a fine colour too. There have been some splendid foraging grounds round here, where some thirty to fifty acres of sainfoin were in flower, but the mowing machine has laid it all low now.

The white clover is wonderfully fine this year, some fields being smothered with it.

Bees and Laurel Leaves.—I have been interested in the number of bees visiting the laurel leaves just now. They confine their attentions to the back of the young leaves and at the base of the midrib. On examination I found four tiny "lumps," two each side of the midrib, and on applying this part to the tongue a decided sweet taste was noticeable. Have brother bee-keepers noticed this?

Do Strange Bees Join a Swarm?—In packing swarms, I have noticed how quickly bees are attracted to the swarm-box, endeavouring to get through the perforated zinc to the swarm. I though at first that these were part of the swarm, and got "locked out," and no doubt some of them were. I brought a swarm home (some one and a half miles) ready packed, and placed it for a few minutes behind a hedge about thirty yards from some of my hives. When I returned to the box I found several bees on the box trying to get in to the swarm, with wings vibrating and "tails" up.

These must have been strangers, as I was careful to brush off all bees as I was bringing them home. This made me ask the question: "Are our swarms augmented by strangers?"—Hants Bee, June 25.

PICKLED BROOD.

[6347.] Since writing on the above subject on page 223, I have again examined the affected stock and find that the bees have not removed the dead larvæ from the combs. I also find that foul brood is present, and have, therefore, cleared the bees off the combs, which seems to be the only radical cure. The conclusion I arrive at is that even though there be no ropy matter present in cells that "pickled brood" must be foul brood in a certain stage. It might be cured by the bees if they would remove the apparently chilled brood, and it may have been so cured in the cases observed by Root, which came and went, as stated by him. — W. J. Farmer, Redruth.

RAILWAY RATES FOR HONEY.

PER PASSENGER TRAIN.

[6348.] This question seems to crop up periodically in the B.B.J., and, as the packing season is with us again, I thought a perusal of the enclosed leaflet might be interesting and useful to you. It has recently been issued by the North-Eastern Railway Company, and shows even cheaper rates than the ordinary half-rate at "owner's risk," especially for long distances.

As the regulations will apply equally to all the large companies, they should benefit bee-keepers generally. You will notice that "honey in comb" is only conveyed at "owner's risk," therefore, it will at all times come under the cheap rate. I send name, etc., for reference, and sign—A. E. Y., Picton, Yarm.

BEE NOTES FROM CORNWALL.

[6349.] In reply to your correspondent, "L. S. C.," who refers to pickled brood in "cappings of comb" (page 245), may I say that in my last communication I explained how my first case of foul brood was imported. It did not arise in my own apiary, to begin with. I am probably in error in writing with regard to "pickled brood." It must have been a stage of "chilled brood"; but I am puzzled to know why a few larvæ should be chilled in one hive, while the brood in ordinary hives is all right. There was no intention to convey the impression that one disease can possibly become another save in the sense that one disease at times makes a fit soil for quite a different disease. Perhaps "L. S. C." can say if the foul brood germ will develop in a dead chilled bee? Or must the germ be conveyed viâ the food?

Bee-keepers who desire to raise queens at a small expense should use mating-boxes, in which very few bees suffice. I consider it does not pay to break colonies up into two or three standard frame nuclei for the purpose of raising queens, my experience showing that it is cheaper to buy queens than to do that.

A simple way to get young queens is to remove the old ones in mid-July, and let the bees re-queen themselves. But the small mating-box plan is no doubt the best. When putting a virgin queen into a mating-box last week she escaped, but, reaching out my hand, I caught her as she flew away —quite a lucky incident. I recently found that after two swarms had been united, and remained so for thirty hours in a skep, the two queens still were there. The bees had not been confined, and had built a small bit of comb. It would seem, therefore, that two queens cannot sometimes so easily find each other till the bees are spread out on several combs. But one of these queens was a virgin, which might alter the result.—W. J. Farmer, Redruth, June 23.

BEES NOTES FROM CHESHIRE.

[6350.] During the past week I have been busy among the bees in the Mid-Cheshire districts. Among the apiaries one visits some are kept well, some passable, and some whose owners would, to say the least, be doing a kindness to their brother bee-keepers by taking up another "hobby."

I had the pleasure one afternoon this week of vising a charming bungalow, built, I believe, for the express purpose of keeping an apiary in the excellent honey district of Mobberley. Miss Rice, the owner of this ideal spot, who, with her partner in bee-keeping, the well-known Cheshire bee-keeper, Mr. J. Cotterill, of Bowdon, have some sixteen stocks, kept in a way that made me wish I could only show them to some of our dilatory brothers. I spent several interesting hours with Miss Rice and Mr. Cotterill, and came away having learnt something, and shall long remember the kindness extended to me.—E. Pidduck (Expert on Tour in Cheshire).

AMERICAN AND COLONIAL PAPERS.

EXTRACTS AND COMMENTS.

By D. M. Macdonald, Banff.

"Starters" of Foundation for Swarms.—Mr. J. A. Green, in *Gleanings*, records his vote for these: "Facts which I have observed for a number of years have led me to use foundation in the brood-frames in only two ways—first, as a narrow starter not over an inch wide; and, second, in full sheets of foundation. I have been compelled to change my mind by finding that I could not get the best results in honey-production except by hiving swarms in a contracted hive with only narrow starters." This is instructive, and is given apropos of a comment by "Amateur" on page 232 (No. 6327), wherein he suggests that I am unorthodox, on page 212, in regard to the preference thereon recorded in favour of hiving on "starters." But the advice there given is that of a man whose opinion carries far more weight. The article, as I thought all readers would understand from the heading, is made up of extracts from Mr. Hutchinson's book, "Advanced Bee-keeping," without even a single comment from my pen. I hope, however, to devote an article to the subject soon.

Scent at a Premium!—Where was Mr. A. C. Miller when the *American Bee-keeper* for June was being edited? Mr. Dayton, on page 109, gives him some food for thought. "As soon as a swarm alights on a bush the queen begins to travel through and through the cluster of bees, *leaving her scent on each worker* she touches or travels over, and this is the main stimulus that causes the bees to seek isolation from the parent hive." The words I have italicised open up a new "odour theory."

The Best.—From the editorial pages of the same paper I cull the following sentence:—"Merit, with reference to apiarian appliances, is very largely a matter of personal preference. Men are different in tastes, temperament, ambition, and in modes of achieving their respective purposes. That is best which best suits ourselves." I often think there is far too much of "follow my leader" in bee-keeping. As I quoted lately, "Consider the advice, etc., of men who have succeeded, but *do your own thinking*."

Keeping Forty Million Bees!—At the late Chicago Convention one item of the pro-

gramme read: "How many bees shall a man keep?" With Mr. E. D. Townsend's aid I work it out as about 40,000,000! Mr. Townsend keeps 800 colonies at times. Giving each of these a population of 50,000 bees in the height of the season, we find his live stock should tot up to the foregoing. But the gist of his article leads to the belief that he considers 100 colonies in one location the ideal number, and a total of 500 colonies as sufficient to make him "quite sure of depending on the bees for a living, and a little extra for a rainy day." We in this country are far short of this ideal, so it is no wonder our Editors invariably warn enthusiasts on paper to "ca' cannie" in starting an apiary as the sole means of subsistence. Very few even in America, I think, believe in keeping many colonies in one locality. I note Mr. M. A. Gill, who has over 1,000 colonies, has "eleven apiaries, containing a little over 100 colonies each." This may be taken as the "standard" sized apiary.

Bunkum!—A Mr. W. Reid writes as follows in the *Australian Bee Bulletin*:—"I do not know if the article quoted from is original or copied from some unknown source, but I have no hesitation in voting the "facts" as *fiction*. Such one-sided statements are the acme of ridiculosity, so that their mere enumerance goes further in their refutation than any words of mine, however strong. "A neighbour had thirty-three hives. Thirty-one blacks died of starvation, leaving him two Italian hives. Another bee-keeper alongside of him, at the same time, had nineteen blacks and one Italian. The nineteen died from starvation, leaving him the one Italian. I knew another bee-keeper who had forty-two hives—two Italians. Bee-moths ate out the forty blacks, leaving the two Italians." Mr. W. Reid has the modesty to conclude this rhapsody with the following words: "I think, Mr. Editor, I may have trespassed too much on your space." I think so, too, and if I could whisper loud enough to reach Mr. Tipper I would counsel him to edit such copy in future.

"*Bait Sections.*"—Those having doubts about reserving unfinished sections from former seasons to use in section cases to tempt bees up early in the honey-flow might read and digest the following, written by Doolittle for the *American Bee-Journal*:—"I preach the use of bait sections, and I practise what I preach, each year getting my supers ready, baits and all, the same being partially filled with honey, just as the bees left them at the end of last season, with no precaution but that the cappings of all sealed cells are broken. I have yet to see wherein this mode of procedure is not as good as having these combs emptied in the fall. But it is absolutely necessary to have the cappings broken so that the honey may be removed, and my experience proves that this honey will be removed before any more honey is placed in the cell." A bait section, smelling of honey newly uncapped, is a very great incentive to the bees to take possession of supers early in the season.

"*I Like My Job.*"—The words are said to be a quotation from a speech made by President Cleveland when he was condoled with about his hard work. "Love lightens labour," says the proverb. The editor of the *Bee-keeper's Review* says:—"I have a lot of hard work, physical and mental, but 'I like my job,' and it is simply a pleasure to meet and overcome obstacles. Without this love of the business, and this ambition to succeed, a man soon drifts back to the rear."

Queries and Replies.

[3338.] *Dealing with Suspected Stocks.*—On Monday last, when examining one of my four hives, I found it rather badly affected with foul brood. Although I only started bee-keeping last year, I have, so far, managed fairly well with the aid of the "Guide Book" and B.B.J., but have never before seen the disease; yet I could not have been mistaken, as it was exactly the same as described in the "Guide Book"—*i.e.*, uncapped brood yellowish brown, some capped cells with capping indented and irregularly perforated, and, in one or two cases, contents of cells were dried to a scale; there was also a most offensive smell. I at once cut out the sample piece of comb sent containing dead brood. The stock in question was a last-year's swarm which issued on July 1, and was hived in a skep, and on April 5 I placed skep above ten frames of "Weed" in a home-made "W. B. C." hive (new). On Monday last I was looking to see if queen had descended, and found four frames full of brood, all with a few patches more or less as described, three frames partly filled with unsealed honey and pollen (these cells never having contained brood), and three frames of foundation untouched. The above particulars were sent early last week, and on finding no reply in yesterday's B.B.J., I made an artificial swarm of these bees and placed them in a skep, with butter-muslin tied over bottom and a piece of perforated zinc over the feed-hole, and placed them in a cool house, but was rather astonished this morning to find them nearly all dead, and a lot of them apparently wet with honey. With regard to contents of hive, I burnt the four frames, containing brood, together with skep, and all quilts, etc. I then syringed the other six frames (after extracting honey) with a solution of formalin, thoroughly washed hive with soluble phenyle, and fumigated both with burning sulphur, and what I wish to ask now is:—1. Would you

consider this hive and frames safe to put fresh bees in? 2. Would you overhaul the other three strong stocks now, or wait until end of honey flow? Thanking you in anticipation, I send name for reference and sign—E. R. (Sussex), June 25.

REPLY.—1. We regret our inability to examine all samples of suspected combs each week owing to the number forwarded for inspection. We took first chance to inspect those sent up, after the B.B.J. was "through press," and our "notes" on your sample read: "Slight foul brood in new comb." However, as you have taken the drastic measures stated and got the bees off combs with bad results, there must have been some mismanagement on your part to cause the bees to be suffocated. Perhaps the skep was not turned bottom up, or the covering material was not sufficiently porous. After the precautions taken and the fact of new combs not having bred in before, it will be safe to deal with the hive as proposed. 2. If the other three stocks are not in worse condition than first one, and are all doing well now, we advise you to leave the bees to gather all they can while honey is to be had, and then get bees off combs, taking more care in giving ventilation while in confinement.

[3339.] *Feeding Bees while Sections are On.*—I shall be much obliged if you will put me right on the following point. Two friends of mine, both bee-keepers as well as myself, have this year arranged a modest "sweepstake" for the apiary which turns out the largest number of completed ordinary 1lb. sections—to average per hive. I had fed my bees right up to the time the honey-flow commenced, and the racks were placed on. My friends had not. They do not object to the feeding, but gently insinuate that it is not quite fair; they are of the opinion that the bees carry up the stored syrup from the brood-chamber frames and place same in the sections. Of course, I have not given any syrup after putting on the racks. Will you kindly let me know in your query column if this is correct? I send name, etc., for reference, and sign—C. W., Bath, June 23.

REPLY.—Whatever may be the "law" of the case, we are of opinion that no syrup will be carried into sections this season from brood-chambers if feeding was discontinued as soon as honey began to come in from outside.

[3340.] *Comments on Queen Rearing.*—Noticing the comments made by "A. E. E.," Romford (No. 6325, page 222) prompts me to record an experience of my own in queen rearing. Last year I introduced to a queenless stock a comb containing eggs. On this the bees built as fine a queen-cell as I ever saw, which, however, failed to hatch out, and, on opening it some time later, I found in the cell two dead worker bees. I would thank you for replies to the following queries:—1. How soon after the queen-cell is occupied may a swarm be expected? 2. In case of a strong stock losing its queen in spring, and a young queen being raised and beginning to lay before drones are on the wing, is it not worth while to keep her in hopes of her being mated later? I send name for reference and sign—T. D., Broughton-in-Furness.

REPLY.—1. The time occupied in rearing a queen bee from the time the egg is laid is about fifteen days, and the prime swarm usually issues about eight or nine days before the young queens left in the parent hive begin to hatch out. 2. No use whatever; once a young queen starts laying she will never take a mating trip, but remains a drone-breeder as long as she lives.

[3341.] *Bees Carrying Off Foundation.*—May I ask your advice on the following incident? To one of my stocks of bees, on June 8, I gave a rack containing twenty-one 1lb. sections, some fitted with full sheets of foundation, and a few with combs from which I had extracted contents last year. The bees had taken possession of the rack when I looked at it a few days later. On looking at them to-day I was astonished to find that every particle of wax foundation had been removed from the section in each. I therefore ask: What is the cause of this, and what course should be adopted? As an experiment, I have put on an excluder, and substituted a rack of shallow-frames for the empty section rack.—P. W. L. (Capt.), Berks, June 25.

REPLY.—We should like to see one of the sections from which the foundation has been carried off by the bees, never having heard of a similar case to the above.

[3342.] *Dealing with Chilled Brood.*—I enclose some pieces of comb cut out of a frame in a strong hive. There was plenty of larvæ in other combs, but this was the only one that had these black ones, and you will notice that other cells in this same comb have apparently normal larvæ. Would you kindly tell me what it is, and if it is likely to infect the other combs; also the cause and means of prevention and cure, if any? The upper half of the comb had only normal larvæ in it, and I put it in a queenless nucleus. 2. Ought I to have destroyed it? I was careful to see that there was no black larvæ left in it. I should be much obliged if you would let me have an answer in next issue, as others here are anxious for information also.—Kew, London, W.

REPLY.—1. The dead larvæ in comb is chilled only. We find no foul brood in cells. 2. It is very probable that the sealed brood would be chilled to death in the nucleus hive, as small colonies of bees are unable to sustain a sufficiently high temperature to hatch any brood beyond their own little cluster.

Bee Shows to Come.

A nominal charge of 2s. 6d. is made for notices (not exceeding 7 lines) in this column, 10 lines charged 3s. 6d., up to 15 lines 5s., which covers cost of insertion from order till date of show. Cash should accompany orders for insertion.

July 18, at Ashby-de-la-Zouch, Leicestershire.—Show of Bees, Honey, and Appliances, in connection with Annual Flower Show. Three open and two local classes, and one L.B.K.A. Bee demonstrations. Schedules from J. H. Dunmore, Secretary, Alandale, Ashby-de-la-Zouch. **Entries Close July 16.**

July 19 and 20, at Gainsborough.—Show of Honey, Hives, and Bee Appliances in connection with the Lincs Agricultural Society. Bee Department under management of the Lincs B.K.A. Fourteen classes. Liberal money prizes and silver medals. Schedules from R. Godson, Hon. Sec., Lincs B.K.A., Tothill, Alford, Lincs. **Entries closed.**

July 25 and 26, at Cardiff.—Annual Show of the Glamorgan B.K.A. in connection with that of the Cardiff and County Horticultural Society. Honey, Wax, Appliances, etc. Classes for members, novices. Five open classes, with prizes for sections and Bee-appliances, 30s., 15s. Entry fee for one or more of the open classes to non-members, 2s. 6d. Schedules from Wm. Richards, Hon. Secretary, The Red House, Gabalfa, Cardiff. **Entries close July 20.**

August 1, at Henbury, near Bristol.—Annual Show of Honey and Wax, of the Henbury District Beekeepers' Association, with bee lectures, by the County Council's expert, in connection with the Horticultural Society's Exhibition. Open classes, good prizes (two with free entry). Hon. Sec. J. Atkin Waller, Pen Park, Westbury-on-Trym, Bristol. **Entries close July 25.**

August 29, at Chester.—Cheshire B.K.A. Show in connection with the County Agricultural Society. Open classes for Hives, Observatory Hives, Sections, and Extracted Honey. Baroness Burdett Coutts' prize hive for best exhibit shown by cottager member. Seven classes for members. Schedules from T. A. Beckett, St. Werburgh Chambers, Chester. **Entries Close August 8,** or at double fees, **August 15.**

August 8 to 10, at Middlesbrough.—Show of Honey, etc., in connection with the Royal Yorkshire Agricultural Society. Schedules and form of entry from John Maughan, Secretary, Blake street, York. **Entries close June 30.**

August 8, at Clevedon, Somerset, in connection with the Horticultural Show.—The Somerset B.K.A. will hold its first annual Honey Show as above. Several open classes. Schedules from Louis E. Snelgrove, Hon. Sec., Cromla, Locking Road, Weston-super-Mare. **Entries close July 21.**

August 9, at Abingdon Park, Northampton. — Honey Show of the Northants B.K.A. Special prizes, including the Baroness Burdett Coutts' prize hive for cottager members, also three open classes, including one for single 1-lb. jar honey. (**Entry free.**) Prizes, 20s., 10s., 7s. 6d., and 2s. 6d. Schedules from R. Hefford, Hon. Sec., Kingsthorpe, Northants. **Entries close August 3.**

August 9, at Madresfield, Malvern. — Annual Show of the Worcestershire Bee-keepers' Association. Open class. Schedules from Mr. Geo. Richings, 2, Shrubbery Terrace, Worcester.

August 16, at Yetminster, Dorset. — Annual Show of the Yetminster and District B.K.A. held in a field kindly lent by Mr. Jolliffe. Four open classes, including three 1-lb. jars extracted honey, three 1-lb. sections, and cake of beeswax. Schedules from G. Leeding, Hon. Sec., Bradford Abbas, Sherborne. **Entries close August 10.**

August 17. — In Public School, Fort William. — Honey Show in connection with the Horticultural Society. Classes for sections and extracted honey, open to amateur and cottagers. Challenge class (open to all) for three 1-lb. jars extracted honey; prizes, 21s., 12s., 8s., and 4s.—Schedules from Secretary, Horticultural Society, Fort William, N.B.

August 24, at Exeter.—Annual Show of the Devon B.K.A., in conjunction with the Devon and Exeter Horticultural Society. The Baroness Burdett-Coutts' prize, hive for the best exhibit shown by cottager members; Dr. Philpott's prize of £1 1s., for the two best sections of comb honey. All open classes. Schedules from the Hon. Sec., A. S. Parrish, Heavitree Road, Exeter. **Entries close August 18.**

August 30, at Montgomery.—Honey Show in connection with Horticultural Exhibition. Two open classes for six 1-lb. sections and six 1-lb. jars extracted honey, 21s., 10s. 6d., 5s., in each class. extracted honey. Prizes, 10s., 5s., 2s. 6d. Entry fee, 1s. each class. Schedules from Mr. W. J. Jones, Secretary, Montgomery. **Entries close August 23.**

September 8, at Dumfries.—South of Scotland B.K.A. 14th Annual Show of Honey, Bees, and Appliances. Five open classes—viz., three 1-lb. jars, three 1-lb. sections, and for single jar and section (free entry), and cake of wax; also handsome money prizes and valuable medals, for members only. Schedules from Jas. Johnstone, Sec., Nelson Street, Maxwelltown. **Entries close September 1.**

September 13, at Castle Douglas.—Honey Section, Dairy Show. Liberal prizes. Five open classes—viz., three 1-lb. jars, three 1-lb. sections, single jar, single section, and for cake of beeswax. Schedule from Jas. Johnstone, or from L. Aird, Hardgate Schoolhouse, Dalbeattie. **Entries close September 1.**

September 8 to 15, at the Agricultural Hall, London.—Honey Show in connection with the Confectioners', Bakers', and Allied Trades Annual Exhibition and Market. (See large advertisement on page ii.) **Open to all British Bee-keepers.** Entry fee in each class one shilling. Schedules from H. S. Rogers, Secretary, Exhibition Offices, Palmerston House, Old Broad Street, London E.C.

September 22 to 29, at the Agricultural Hall, London.—Honey Show in connection with the Twelfth Annual Exhibition and Market of the Grocery and Kindred Trades. Nearly £50 in prizes for honey and beeswax including four prizes of £4, £3, £2, and £1, in honey trophy class. **Open to all British Bee-keepers.** Schedules from H. S. Rogers, Secretary, Exhibition Offices, Palmerston House, Old Broad Street, London, E.C.

September 27, at Altrincham. — Annual Show of the Altrincham Agricultural Society. Good Money Prizes for Honey along with Silver and Bronze Medals of the Cheshire B.K.A., and others. Open Class for Frame-hive (unpainted). Schedules from J. Herbert Hall, 2, Dunham Road, Altrincham. **Entries close September 9.**

October 9 to 12, at the Agricultural Hall, London.—Show of Honey and Bee Produce in connection with the British Dairy Farmers' Association. Numerous and liberal prizes for honey, etc., including the valuable Silver Challenge Cup of the B.B.K.A. Schedules from Mr. Wm. C. Young, Secretary, 12, Hanover Square, London, W. **Entries close September 12.**

Notices to Correspondents & Inquirers.

Letters or queries asking for addresses of manufacturers or correspondents, or where appliances can be purchased, or replies giving such information, can only be inserted as advertisements. The space devoted to letters, queries, and replies is meant for the general good of bee-keepers, and not for advertisements. We wish our correspondents to bear in mind that, as it is necessary for us to go to press in advance of the date of issue, queries cannot always be replied to in the issue immediately following the receipt of their communication.

MIDLOTHIAN (N.B.).—The queen looks old and worn-out, but there is nothing to indicate any disease about the other bees.

(MRS.) W. C. L. (Merionethshire).—1. Bee Plants.—The clover you send is not clover at all, but the common sea-pink (*Armeria vulgaris*). The heather is bell-heather (*Erica cinerea*), and is a moderately good honey-plant; but the best variety of heather for bees is the common heath (*Erica vulgaris*). 2. August is too early to pack bees up for winter, especially in a heather district, as a good deal of honey is gathered from heather during that month. The end of September is a more suitable time, unless the weather is exceptionally cold and wet.

NEMO (Leominster).—Queen Cast Out.—Queen is probably a virgin, but has been so badly

"balled" by the bees for some hours, that she is all out of normal condition. We will be pleased to have bee-notes at any time from you for insertion in our columns.

G. W. G. (Derbyshire).—Loss of Stocks.—We sympathise with you in your bee trouble, and cannot account for the wholesale losses you have sustained. No. 1 sample shows no sign of foul brood, but the sealed cells containing dead larvæ (almost dried up) are covered with green mould. Other cells contain pollen infested with pollen-mites. No. 2 same as No. 1, both look as if bees had suffered from want of food. No. 3 is is affected with foul brood, and is the only sample containing moist remains of larvæ. No. 4, sealed cells covered with mould. No foul brood at present. This looks like a case of black brood.

Suspected Combs.

A. J. H. (Tring).—This is a very bad case of foul brood, evidently of old standing. We should advise burning the stock without delay.

Anxious (Derbyshire).—There is foul brood in comb sent, which, to judge by its black appearance, is old and useless.

Nunquam (Thirsk).—Comb sent shows slight traces of foul brood, and there is also a lot of drone brood in worker-cells. If the stock is a strong one it would be worth your while to re-queen and deal with the bees as directed in "Guide Book," page 152.

A. E. (Acocks Green).—No trace of foul brood in sample of comb, though from appearance of dead larvæ it looks like a case of "black brood."

J. N. (Portobello).—Sample shows slight signs of foul brood in incipient stage.

L. W. (London, S.E.).—Bad case of foul brood of old standing.

M. M. (Midlothian).—Comb is affected with foul brood.

Scotia (Perths.).—A bad case of foul brood. Unless bees are very strong it would be advisable to burn the lot lest other stocks become infected.

G. S. (Essex).—The piece of comb shows signs of foul brood, but as it is evidently a mild case we should advise you to treat the stock as directed in the "Guide Book."

*** Some Letters, Queries and Replies, &c., are unavoidably held over till next week*

Special Prepaid Advertisements.

Twelve words and under Sixpence: for every additional Three words or under, One Penny.

Advertisements for current issue must be received by first post on Tuesday.

WANTED, several STRONG SWARMS, healthy English bees in skeps; cheap. — J. REES JONES, Llanon, Aberystwyth.

1906 SELECTED QUEENS, Woodley's strain; guaranteed healthy and safe arrival in safety-introducing cage, 3s. 6d.; virgins, 1s. 3d.—TOLLINGTON, Woodbine Apiary, Hathern, Loughborough.

SPLENDID 1905 QUEENS, fertile, 4s. 11d. each.—A. J. BUTLER, F.R.H.S., Westville, Scotter, Lincoln.

FOR SALE, 30 good SECTIONS, surplus lot, not granulated, 15s. — HEATH, Sawbridgeworth, Herts. Q 79

STRETCHING and SAGGING of FOUNDATION prevented by simple device. Will last for years. 20 odd years' proof. Sample 7 penny stamps. Full set for one frame, 1s. 1d., with directions for use.—W. PALMER, 5, Clarence Place, Croft Street, Newcastle-upon-Tyne. Q 78

WILL CUSTOMERS kindly return all empties belonging to A. COE, Apiary Hall, Ridgewell, Halstead, Essex? Q 77

HALF TON splendid Light English New WHITE CLOVER HONEY, £3 per cwt. Sample 3d.—ALBERT COE, Apiary Hall, Ridgewell, Halstead, Essex. Q 76

QUEENS, from Sladen's strains, several 1906 fertile, 5s.—PAUL, Salisbury Road, Bexley. Q 75

IN one of the prettiest villages in East Devon, on a niece farm; FURNISHED APARTMENTS.—SOUTHCOTT, Gittinsaw Apiary, Honiton. Q 73

FOR SALE, 20 stocked Carniolan HYBRIDS, each on eight frames, Abbott's pattern, six of brood; all combs wired and worked from full sheets.—T. W. SHAW, Eden House, Sedgefield, Co. Durham. Q 74

WANTED, GEARED EXTRACTOR, two frames, secondhand, perfect. Also Honey Ripeners. Lowest.—PADDOCK, Uppington, Wellington, Salop. Q 72

FOR IMMEDIATE SALE, owner going abroad, TWO new WELLS' HIVES; in use one season. Price, including Wells' and Winter Dummies, 12s. 6d. each. Also a quantity of well-built Section Combs, 3s. 6d. per sack of 21. Metal Dividers.—F. R. COURT, Green Street, Sittingbourne. Q 71

EXTRACTED HONEY, 6d. lb.; 28 lb. tins. Sample 3d. Large number of Section Crates for Sale. 1s. 9d. each.—LING, Shady Camps, Cambs. Q 70

HOLIDAYS.—Cornwall; delightful situation near sea and Land's End; 30s. — S. HARBORNE, Apiary, St. Buryan, R.S.O. Q 69

BELGIAN HARES.—Prize bred Doe, others; sale or exchange. Honey Extractor, Mail Cart wanted. —18, Hartington Terrace, Brighton. Q 68

NEW SECTIONS FOR SALE. NEW SECTIONS.—J. P. FISON, Holningsea Apiary, Cambridge. Q 67

PURE EXTRACTED HAMPSHIRE 1906 HONEY FOR SALE, 28lb. tins, 55s. per cwt. Sample 3d. Cash or deposit.—A. GREEN, Tangley, Andover. Q 66

STRETCHING and SAGGING of FOUNDATION prevented by simple device. Sample seven stamps. Full set for frame, 1s. 1d.—W. PALMER, 5, Clarence Place, Croft Street, Newcastle-upon-Tyne. Q 65

QUEENS (celebrated Doolittle strain of Improved Italians).—A customer writes: "The virgin I had from you last year has done splendidly. Stock now on 33 Standard Frames." Virgins, 1s. 6d.; Fertiles, 5s. Safe delivery guaranteed. First come, first served.—DAVID TAYLOR, 1, Ilminster. Q 64

QUEENS, Native, 1906.- Fertile, 2s. 6d.; Virgin, 1s. 6d.; post 2d.; in introducing cage. Nuclei, 3-frame, 1906, Queen, 10s. Honey, new season's, light, cwt., 52s. 6d.; three cwt., £7 10s. "S. C." Jars, 8s. dozen. Combs, Brood, 7d. each.—CHARTER, Tattingstone, Ipswich. Q 63

COMFORTABLE APARTMENTS for Brother Bee-keepers visiting Douglas. Terms: Tea, bed, and breakfast, 3s. 6d.; or full board, 5s. per day.—TORSLEY'S, Merridale House, top of Castle Drive, Douglas, Isle of Man.

AN ENGLISH BEE-KEEPER, of wide experience, seeks an ENGAGEMENT in a warmer climate.—Address "APICULTURE," "B.B.J." Office.

Editorial, Notices, &c.

THE "ROYAL SHOW" AT DERBY.

A SPLENDID SUCCESS.

The sixty-seventh annual exhibition of the Royal Agricultural Society was held on an admirably-chosen spot at Alvaston, about a mile outside Derby. A more suitable place could not have been selected, the formation of the ground being such as to keep the various sections of the show (in spite of the enormous extent of exhibits) compact, and easy of inspection by visitors.

The occasion was notable also as marking a return to the former course of holding each annual show in various counties of England, and, following, as it did, the disastrous effects on the fortunes of the Society by the attempt to establish a permanent showground in London, it was in the highest degree encouraging to find that so splendid a success was achieved by the new departure. Indeed, it now seems certain that the Society may look forward to a prosperous time for years to come. The show was by no means favoured with regard to weather, two of the four days being quite spoilt by heavy rain, yet the number of visitors for the four days reached the enormous total of 119,000.

We must defer till next week the few observations we may wish to make on the bee department of the show, but altogether the display was a very fine one.

Messrs. T. I. Weston, Walter F. Reid, and Peter Scattergood judged the exhibits, while Mr. W. Broughton Carr acted as steward of the department.

AWARDS.

Class 418.—*Collection of Hives and Appliances.* — 1st, W. P. Meadows, Syston, Leicester; 2nd, Abbott Brothers, Southall, London; 3rd, E. H. Taylor, Welwyn, Herts; r. and h.c., W. Shepherd, Higher Broughton, Manchester.

Class 419. *Complete Frame-hive for General Use.*—1st, Abbott Brothers; 2nd, S. P. Soal, Rochford, Essex; 3rd, W. P. Meadows; r. and h.c., Geo. Rose, Gt. Charlotte Street, Liverpool; h.c., W. P. Meadows.

Class 420. — *Complete Frame-hive for Cottager's Use, price not to exceed* 10s. 6*d.*—1st, E. H. Taylor; 2nd, S. P. Soal; 3rd, James Lee and Son, London; r. and h.c., Abbott Brothers.

Class 421. *—Honey Extractor.*—1st, W. P. Meadows; 2nd, W. P. Meadows,; r. and h.c., Jas. Lee and Son.

Class 422.—*Observatory Hive with Bees and Queen.*—1st, J. Pearman, Penny Long Lane, Derby; 2nd, J. Bakewell, Burton-on-Trent; 3rd, W. Dixon, Beckett Street, Leeds; r. and h.c., G. Rose.

Class 423.—*Any Appliance connected with Bee-keeping.*—No award made.

HONEY.

Entries in Classes 424 to 427 can only be made by residents in Cheshire, Cumberland, Derbyshire, Durham, Herefordshire, Lancashire, Leicestershire, Lincolnshire, Monmouthshire, Northumberland, Nottinghamshire, Rutland, Shropshire, Staffordshire, Warwickshire, Westmorland, Worcestershire, Yorkshire, the Isle of Man, Ireland, Scotland, or Wales.

Class 424.—*Twelve* 1-*lb. Sections.*—1st, G. W. Buttery, Wheaton Aston, Stafford; 2nd, J. Pearman; 3rd, J. Stone, Little Cubley, Derby; r. and h.c., J. Helme, Weobley, Hereford.

Class 425.—*Twelve* 1-*lb. Jars of Extracted Light-Coloured Honey.*—1st, T. S. Holdsworth, Kirton Lindsey, Lincs.; 2nd, Job Astbury, Kelsal, near Chester; 3rd, R. Morgan, Cowbridge, Glamorgan; r. and h.c., Jas. Lee and Son; h.c., J. Pearman and John Stone.

Class 426.—*Twelve* 1*lb. Jars of Extracted Medium or Dark-Coloured Honey.*—1st, J. Boyes, Cardiff; 2nd, J. Helme, Weobley, Hereford; 3rd, Rev. G. C. Bruton, Gt. Hayward, Staffs; r. and h.c., W. H. Bird, Stapenhill, Burton-on-Trent.

Class 427.—*Twelve* 1-*lb. Jars of Granulated Honey.*—1st, F. F. Upton, Rugeley, Staffs.; 2nd, W. H. Bird; 3rd, Sydney Durose, Burton-on-Trent; r. and h.c., J. Stone; h.c., Joseph Boyes, Cardiff, and Arthur Fox, Bardsea, Ulverston.

Entries in Classes 428 to 431 can only be made by residents in Bedfordshire, Berkshire, Bucks, Cambridgeshire, Cornwall, Devon, Dorset, Essex, Gloucestershire, Hampshire, Herts, Hunts, Isle of Wight, Kent, Middlesex, Norfolk, Northamptonshire, Oxfordshire, Somerset, Suffolk, Surrey, Sussex, and Wiltshire.

Class 428. *Twelve* 1-*lb. Sections.*—1st, Chas. Lodge, High Easter, Chelmsford; 2nd, E. C. R. White, Newton Toney, Salisbury; 3rd, R. Brown, Somersham, Hunts; r. and h.c., W. Woodley, Newbury, Berks; h.c., J. Garratt, Meopham, Kent.

Class 429.—*Twelve* 1-*lb. Jars of Extracted Light-Coloured Honey.*—1st, C. Lodge; 2nd, D. Hancox, Deddington, Oxon; 3rd, E. C. R. White; r. and h.c., W. P. Meadows; h.c, Richd. Brown.

Class 430.—*Twelve* 1-*lb. Jars of Extracted Medium or Dark-Coloured Honey.*—1st, E. C. R. White; 2nd, F. J. Old, Piddington, Northants; 3rd, R. Brown; r. and h.c., Jesse Garratt.

Class 431.—*Twelve* 1-*lb. Jars of Granulated Honey.*—1st, J. Barnes, Burwell, Cambs.; 2nd, W. Woodley; 3rd, C. Lodge; r. and h.c., F. R. Ford, Burwell, Cambs.; h.c., W. P. Meadows.

Class 432.—*Three Shallow-frames of Comb Honey for Extracting.*—1st, E. C. R. White; 2nd, R. Brown; 3rd, J. E. Williams, Morehampton.

Class 433.—*Six* 1-*lb. Jars of Heather Honey.*—1st, J. Berry, Llanrwst, N. Wales; 2nd, T. Walker, Hawkshead, Lancs.; ; 3rd, W. A. Woods, Normandy, Guildford; r. and h.c., Walden Bros., Wimbledon, S.W.

Class 434.—*Six Jars of Heather Mixture Extracted Honey.*- 1st, W. E. Brooking; 2nd, F. F. Upton, Rugeley, Staffs; 3rd, A. G. Pugh, Beeston, Notts.; ; r. and h.c., E. P. Betts, Camberley, Surrey; h.c., W. Dixon.

Class 435.—*Honey Trophy* (*Attractive Display in any Form*).—1st, J. Pearman; 2nd, W. H. Bird; 3rd, Sydney Durose; r. and h.c., Gray and Ball, The Apiary, Lincoln.

MISCELLANEOUS.

Class 436.—*Beeswax* (*Not less than* 2 *lb.*—1st, E. C. R. White; 2nd, R Brown; 3rd, C. Lodge; r. and h.c., Mrs. H. H. Woosnam, Newton Abbot, Devon; hc., Miss A. M. Morley, Temple Brewer, Lincoln.

Class 437.—*Beeswax* (*Not less than* 3 *lb., in Shape, Quality, and Package Suitable for the Retail Trade*).—1st, E. C. R. White; 2nd, J. Pearman; 3rd, J. Berry; r. and h.c., F. W. Frusher, Crowland, Peterborough.

Class 438.—*Honey Vinegar* ($\frac{1}{2}$-*Gallon*).—1st, G. Gray, Eagle Hall, Lincs. No other prize awarded.

Class 439.—*Mead* ($\frac{1}{2}$-*Gallon*).—1st, T. H. Geary, Enderby, Leicester.

Class 440.—*Exhibit of a Practical or Interesting Nature Connected with Bee Culture.*- 1st, F. W. L. Sladen, Ripple Court, Dover; Certificate of Merit, W. Dixon; r. and h.c., J. Gray.

Class 441. *Exhibit of a Scientific Nature not Mentioned in Forcoming Classes.*- 1st, Geo. Hayes, Beeston, Notts (Nature Study of the Honey Bee); Certificate of Merit, Geo. Rose (lantern slides and bee books); r. and h.c., John Carver, Wellington, Salop (Appliance for rapid glazing of sections).

ADVICE ABOUT EXAMINATIONS.

BY AN EXAMINER OF WIDE EXPERIENCE.

(Second Article.)

Coming now more especially to the examinations conducted by the B.B.K.A., my remarks will be principally pertinent to candidates who enter for first-class and second-class certificates of expertship. But at the outset there is one point to which all entrants should attend, viz.:

1. Study carefully, and follow definitely, the regulations which give a clear outline of the requirements under each class. These regulations have been drawn up and revised with much thought on the part of those who have framed them, and, naturally, examiners are bound to adhere to them. Now, for second-class certificates, the preliminary condition is, "Evidence of a fair education is requisite." While, for third-class, practical work and oral answers to simple questions are sufficient, a distinct advance is expected in each of the remaining classes. Hence candidates whose spelling, grammar, and punctuation are very faulty cannot be said to give evidence of having received even a "fair education," and though remarkable clearness of thought, ability in expression, and sound knowledge, may go far to atone for literary lapses, it would be impossible to pass by such defects as I have named in the case of aspirants to first-class certificates, from whom is demanded "Evidence of a good general education." If this point is borne in mind disappointment will be saved to some whose laudable ambition is fatally handicapped by early scholastic deficiencies. Should it seem hard to any to be thus cut off from the higher grades of certificates, they must remember that the Council of the B.B.K.A. have been obliged to regard the interests of the whole science and art of bee-keeping, and to maintain, for the general welfare, distinct and important differences between the classes of expertships. The necessity for this course has become the more urgent since County Councils and other public bodies have called into requisition the services of bee-experts, whose qualifications are vouched for chiefly, if not entirely, by the class of certificate which they have gained by the B.B.K.A. examinations.

2. Keep very definitely to the exact subject of each question. It is worse than useless to ramble off on side issues or to enter into details which are dragged in, rather than contained in, what the examiners have really asked. Under this head it may be well to give one or two concrete examples. If then, a question is put as to the establishment of an apiary, it is by no means expected that a dissertation should be written on manipulations and management. If the treatment of an outbreak of "bee-pest" is in question, there should be no description of the nature and causes and evidences of the disease. And, again, if asked what circumstances make the feeding of stocks desirable, it is futile to give descriptions of apparatus and recipes for syrup or candy.

3. Do not limit your reading, especially for first class, to one or even two text-books, however admirable. It is important to have some knowledge of the works of several authors, of various views, experience and authority. Moreover, it is very

advisable to assimilate all information, so that, instead of adhering to the words of any particular writer, answers may be given in the candidate's own language. Successful paraphrase affords evidence both of an understanding of the point in question, and of an alertness of mind which may rightly tell in an examination.

4. Take some pains in learning to draw diagrams. Two advantages accrue from this course. First, the eye will greatly assist the mind in apprehending and retaining facts capable of being represented by drawings; and, secondly, the faculty of making such drawings on a blackboard or on paper will be an immense help towards arousing and maintaining the interest of any lectures which an expert may have to give. A third, if temporary, benefit is that in examinations good diagrams, when asked for, tell in the allotment of marks.

5. Lastly, cultivate thoroughly legible handwriting; avoid flippancy and attempts at jokes; read over and make necessary corrections to your papers before giving them up, and see that the pages are numbered and arranged in their proper order.

To those who have had to pass various examinations the advice and hints I have given may seem to some extent superfluous. Candidates who are unfamiliar with such tests of knowledge and ability will do well to consider with care each of the points mentioned in my two articles.

Correspondence.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

BEES CARRYING OFF FOUNDATION.

[6351.] When I saw this query (3341) in the B.B.J., June 28, I thought that I was about to get the solution of a conundrum which had long puzzled me. I first observed it some years ago, in a section rack in which I had a piece of plate glass for the "follower," so that the three outside sections could be watched; and to my surprise, instead of drawing out these end sections, the bees gradually nibbled away the foundation. It happened that these three sections were fitted with wax which had been kept for two or three years, and I thought possibly this might have something to do with the conduct of the bees. I therefore replaced these sections with three fresh ones, fitted with full sheets of new foundation. The bees at once started drawing these out, and by the second day all three were uniformly built to about half the full depth. But at this stage they stopped building, and again nibbled away the comb from the edges, so that it gradually became less and less, until at last there remained only a small scrap of comb hanging from the top bar of each section not much bigger than a full-sized queen-cell. Since then I have frequently noticed that when more sections have been on a hive than the bees have required, on removing them at the end of the season, many of the pieces of foundation, which were originally "full sheets," are found to be greatly reduced in size, and of irregular shape, through having been more or less nibbled away round the edge. I am inclined to think that the bees realise that they have superfluous wax on hand, and make use of it for the purpose of capping their stores. In fitting up sections I now no longer trim off the little bit of foundation which projects above the split top, and I find that the bees always nibble it down close to the wood.—G. S. N., Godstone, Surrey.

A POINT IN QUEEN-REARING.

[6352.] I note Mr. Farmer (6349, p. 256) advises bee-keepers who wish to raise queens at small expense to use mating-boxes, "*in which very few bees suffice.*" I have been raising queens on rather a large scale for some years, and after trying the mating-boxes found the loss of both queens and bees was far greater than if the standard (or a medium-sized frame) was used. In consequence of this I have discarded the small nuclei boxes altogether, and now use a frame 8½ in. deep and 7 in. wide, so made that two will, when placed end to end, hang in a standard body-box, just the same as a standard frame. For bee-keepers who wish to raise a few queens only probably the standard frame is to be preferred. Personally I do not consider the "Swathmore" system of section frames of much use in this district, at any rate. In fact, I think the more bees there are in all queen-rearing operations the better chance there will be of raising and mating prime and prolific queens. A big lot of bees will generally give a good account of themselves, whilst small lots are, with me, usually a failure.—E. W. Carbines.

FIXING FOUNDATION.

A SIMPLE AND EFFECTIVE DEVICE.

[6353.] Seeing in your columns so many complaints recently of foundation stretching and sagging, I send you herewith a sample of a simple device I have used for over twenty years to prevent same, and I can safely say that during those years I have not had an instance of stretched foundation, and consequently not a sagged

comb in my apiary. I first made and used it for making a full-sized comb out of two pieces of foundation, one under the other, so as to fill a deep square frame, thus avoiding about three inches of drone-comb at the bottom. The most severe test I ever put it to was the season before last, when, having nine pounds of driven bees on hand, and only four drawn-out combs to put them on, I filled up with seven sheets of foundation fixed with this device, and next day (a wet one, and no bees flying), about mid-day, carried them a mile and a half to the station, whence they had a thirty odd mile rail ride, and at end of that about two miles in a trap to the heather. It was a risky venture, and I was almost surprised on their return to find every comb perfect—as flat as boards, and, better still, every comb full of honey. The fixers were on all the time. They should be taken off at end of three or four days after being in hive, or when comb is half or three-parts built-out, and danger of stretching gone. If left longer they are apt to pull the comb a little in taking off, but even then do no actual damage to comb. I will send a sample pattern to anyone for seven stamps (see advertisement). Anyone can make them, and the cost is next to nil, as you will see.—NONDESCRIPT.

WORKER-BEE IN QUEEN-CELL.

[6354.] I am forwarding for your inspection a queen-cell containing a fully developed worker-bee in exactly the same position as I found her (head foremost in the cell) in one of my neighbour's hives. This hive had swarmed, and also sent off a cast, and not wishing to further weaken his stock, we went through it in order to cut out all queen-cells but one. We found eight cells, all capped, but not an empty cell from which the young queen accompanying the cast had hatched. While removing one of these cells I noticed the queen cut the capping, and in a few minutes push her way out. Four of the others contained young queens on the point of hatching, two others contained queens in the imago stage, and the eighth the worker-bee. To my mind this confirms the explanations (6329 and 6330, p. 234) that the worker entered the cell after the queen accompanying the cast had left it, and had thus been imprisoned. —W. COPSEY, Seaton.

[From appearance of cell, we should say this has been the case. EDS.]

THE B.B.K.A. INSURANCE SCHEME.

[6355.] Referring to the time policies of insurance should date from, may I suggest that a period between January 1 and December 31 would, according to my experience, be much more convenient for bee-keepers. At present they have to insure for two periods to cover one bee-season.

Members also sometimes send in applications late in June or in July, and on their learning that the insurance will only hold good to July 31, decide to wait till August, the conditions thus entailing unnecessary trouble, and, as an accident may happen in the meantime, I certainly think that the present period is to the disadvantage of members.—GEORGE SAUNDERS, Hon. Sec. and Treasurer, Cumberland B.K.A., June 30.

SECTION "CRATES" OR "RACKS."

[6356.] Would not the most suitable name be "section super" and "shallow-frame super"? Except with bee-appliances, a crate is in the nature of a skeleton box or case, and a rack is always understood to be a frame of a single thickness, with bars or lattice. Take any dictionary definition, and it naturally gives the above ideas of racks and crates. —A. HARRIS, Wavendon, Bucks.

CAPPINGS OF COMB.

By "L. S. C.," Ilkley, Yorks.

Extra Super Room (*p.* 242).—How many bee-keepers use the Raynor crate? Yet what a useful adjunct this may be to the regular supers. A weak stock will often do work in one of these, particularly if drawn comb be given, when no satisfactory work would be done in a larger super, and, when tiering the supers, one of these acts as a fine bait-holder. The extra room can be gauged to a nicety, and the unfinished side of the sections brought to the middle with the minimum of work. For starting the season, for weak stocks, and for "drying off," each hive might with advantage have two of these small racks.

Wiring Foundations (*p.* 242).—Four or five vertical wires cut to short length, say, 7½ in., and embedded (roughly spaced) in the foundation before fixing, and one horizontal wire near the bottom of the frame itself, would, I think, give good results with foundation which showed signs of sag. The vertical wires would support the foundation during building, and the horizontal would support the weak spot in the completed comb.

"Sagging," and also the encroachment of adjoining combs, may be prevented if the sheet is drawn out between slatted dummies. Such providers prevent too many bees from hanging on the sheet, and provide an additional support for the cluster.

Swarms (*p.* 244).—The value of a prime natural swarm lies in the fact that it is definitely headed by a fertile queen, will consequently build up rapidly, and will usually store surplus in the current year.

(*Continued on page* 266.)

HOMES OF THE HONEY-BEE.

THE APIARIES OF OUR READERS.

Our bee-garden picture this week shows a portion of the apiary of Mr. Geo. E. Gelletley, a reader in whom we take more than ordinary interest, from the fact of its owner — seen in photo — being deaf and dumb. Yet he is not only an enthusiast in the craft, but makes his own hives, manages his bees on up-to-date lines, and, notwithstanding natural drawbacks, is in every way a successful bee-keeper, as the following notes, written at our request, will show. He says:—

"When I was a very small boy my grandfather kept about twenty stocks of bees in skeps, which always proved a source of great interest to me, but on his death in 1890 my father (who did not care for bees) sold them off. I was sorry to be thus deprived of this interesting hobby, and determined to keep some bees of my own, but was not able to do this till 1900, when I bought two skeps from a Mr. Dewsbury, who had an apiary of about eighteen skeps about a mile away from my home. Soon after this I visited a friend at Wheaton Aston, who is a beekeeper, and there first saw modern framehives, the appearance and convenience of which pleased me so much that I made up my mind to make such hives for my own bees. I carefully measured the size, etc., then procured some strong boxes from a local shop, and, after some trouble (being only an amateur carpenter), was successful in making five hives, to which I added two of the "W.B.C." type, bought in the flat from one of your advertisers in Gloucester. I transferred my stocks from skeps to framehives by setting the former on top of bodybox of the latter, the bees then transferring themselves. In 1902 I found myself the possessor of seven stocks, all in excellent condition, and during that season I took 60 lb. of good honey from one hive, and from that time I have gone on making what progress I could.

"My practice is to allow bees to gather honey in August and September for their own winter stores, which they are able to do from the heather growing abundantly in this district. I find a ready sale for my honey in the town and shops in the neighbourhood, and usually get 1s. per lb. retail. Since making my first start in bee-keeping I have learnt a great deal about bees chiefly from the "Guide Book," and have successfully performed the operations of making candy and syrup, dividing stocks, transferring, and making up good stocks from driven bees, etc. so I think I can now claim to be a full-fledged bee-keeper. I am also fond of gardening, and like to see flowers growing in front of my hives. As I cannot write well for print, please alter my notes where needed. Wishing all your readers a successful season in 1906."

MR. GEO. E. GELLETLEY'S APIARY, HATHERTON, CANNOCK, STAFFORDSHIRE.

(*Continued from page* 264.)

In a large number of cases such stocks would re-queen themselves; but, in any case, this matter is under the control of the bee-keeper. It is good advice to the beginner to insist upon early prime natural swarms. The strain is right, for one thing.

Formic Acid (*p.* 248).—I can well believe that a hypodermic injection of bee-poison would be beneficial in atony. The specific instance is that of a sturdy beggar who came limping up to the apiary for relief, and obtained an immediate gain in tone, retiring at the double, waving his crutch in his paralysed arm! Laugh? Certainly not!

"*An English Bee-keeper*" (*p.* 250) seeks an engagement in a warmer climate." This is terse, but open to misconstruction. Does his experience include the brimstoning of bees?

"*Worth a Guinea a Hive*" (*p.* 250).—If the hive is worth a guinea, why charge 22s. 6d.? If it be the remedy for swarming which is worth so much, it is cheap at the price. One would expect to pay at least 1s. 1½d.!

A Swing Window (*p.* 253) in the honey cupboard consumes valuable room in a limited space. Where this is important, a loose gauze-covered panel, which may be reversed, will be found satisfactory.

Price of Honey (*p.* 254).—The remedy for low prices is, of course, a combine. Locally, this means missionary work on the part of members, inducing all to join the Association, and use the official label. I know of one County Association which contemplates a depôt for members' honey. Perhaps some of the secretaries will say what they find to be possible of accomplishing.

White Star Bees (*p.* 255).—These may be, under any circumstances, the best stock in the apiary; but is it fair to make comparison between a stock of them wintered with two supers containing abundant honey and other stocks wintered in brood-box only?

In reply to W. F. Farmer (6349), I cannot inform him authoritatively whether the foul-brood germ will develop in a dead chilled bee, but I do not think that it will do so under normal conditions—that is, presuming both to be present in the same hive—so that I should suspect signs of disease in such larvæ to be due to more than accidental contact. I shall have, however, some culture experiments in progress again when the busy season is over which may determine the point.

I also have come across suspicious cases where the definite signs of foul brood were arising, and am at the moment expecting a report from one of these. I shall hope later to refer to the subject. It has already been suggested, and it is quite reasonable to assume, that there may be brood diseases of which we know little or nothing owing to the removal of the affected larvæ, and such possibilities are indicated by anachronisms in the age of the brood. Where disease is found which exhibits any unusual characteristic, I think it should be investigated, if possible, before destruction.

Queries and Replies.

[5343.] *Swarming Vagaries.*—As a constant reader of your valuable journal, I beg to ask for advice on the following:—I have a hive that was in good condition this spring when our expert paid his usual visit, and all went well till June 7, when a swarm issued and settled on a currant bush, 20ft. distant from hive. Being away at work myself at the time, my wife covered the bush with a white cloth, thinking to give me an agreeable surprise on coming home to dinner, but, on her going to the spot an hour afterwards to see how the swarm looked, not a bee was to be seen. So I thought the bees had returned to the parent hive as the latter was so full of bees. Nine days later another strong swarm issued from the same hive and clustered in two lots—a large cluster on an apple tree and a small one on a gooseberry bush. This time I was sent for, and soon got the two lots hived into a skep and left them under the shade of an apple tree till 6 p.m., when I put them into a frame hive fitted with foundation. The skep and bees weighed over 9lb. Next day, Sunday, about 1 p.m., the whole swarm left the new hive and settled again on an apple tree, about 50 yards distant from hive. I again got them into the hiving skep, and left them under the tree so as to give the flying stragglers of swarm a chance to get in; but I had not been ten minutes gone when the swarm came out with a rush and started off in full flight. I followed the vagrants for a quarter of a mile, but lost sight of them, and the swarm was gone for good. On Monday, June 18, another swarm issued from same hive, and, without settling at all, flew clear away, and was lost. Next day I had a look into hive and cut out four empty queen-cells, leaving two that were capped over. There was hardly any brood in comb, but plenty of drones. Not being able to see a queen, I left the two cells, as there is a rack of sections on, and I am doubtful if they will get finished this season. Last year the same hive yielded me sixty-three nicely capped sections. So I ask if you can tell me the cause of bees leaving new hive, and leaving skep also?—A. Vasselin, Ipswich, June 26.

Reply.—It is not easy to give a reason for such vagaries on the part of swarms as are recorded above. Curiously enough, they seldom occur to experienced hands in the craft, ourselves among the number. There must have been some slight mistake in some item of the hiving operations: but we sym-

pathise with our correspondent in his disappointing experiences of swarms, and consequent partial loss of the season's honey crop.

[3344.] *Queens Mating in Swarmed Hives.*—My frame-hive swarmed on May 28, and a second swarm, or "cast," issued on June 8; but the latter returned to the parent hive same day. On examining the brood-chamber on the same day, there was neither eggs nor unsealed brood in combs. But I saw several queen-cells, which I removed. On June 17 I again examined the hive. Still no eggs or young brood was visible. The bees behaved just as if the queen were dead. I therefore introduced a frame containing eggs and brood, in all stages of development, taken from the swarm of May 28. 1. Was I right in acting in this way? 2. What would happen if I were to get and introduce a fertile queen? Would any queen-cells that the bees might be preparing be destroyed, in the presence of an accepted fertile queen?—F. D. E., Bedford.

Reply.—1. The proper course would have been to wait till it became certain that the young queen heading the parent hive was mated and laying before venturing to assume that the parent hive was queenless. Sometimes a young queen is unmated for a full fortnight after hatching out. 2. If the young queen has not disappeared, but is eventually mated, she will head the colony and destroy any alien that may be introduced. When a queen is accepted and laying, all queen-cells will be destroyed.

[3345.] *Dwindling Colony in June.*—About a month ago I purchased a stock of bees, which were duly sent by rail, and on arrival they seemed a good, strong lot, but since then the bees have dwindled rapidly, till they barely cover three frames (they covered nine at first). There is a small quantity of worker brood and eggs in one frame only, and in the others I notice dead brood scattered here and there, the cappings of which are perforated in many cases. I am sending sample of comb for your inspection, and I do not think there is anything wrong; but never having seen foul brood myself, I cannot be sure. I think the queen must have been damaged on the railway journey. If healthy, would it be worth while to requeen, or should I unite to another lot? Thanking you in anticipation for reply, I send name, etc., and sign—W. H. B., Walthamstow.

Reply.—On examination we find foul brood in one cell only of sample comb sent, and cannot understand the rapid dwindling of the colony from nine to less than three frames covered by bees in so short a time. The cold weather in May would, no doubt, check breeding by lowering the hive temperature, and the consequent loss of bees would do the rest. We should not advise requeening, because the present queen may not be responsible for stoppage of breeding, and a new queen might do no better.

[3346.] *Heather Bee-forage.*—I enclose two sprigs of heather, numbered 1 and 2 respectively. No. 1, as will be seen, is in bloom, while No. 2 is not in flower. No. 1 is blossoming early this year, and I expect will continue blooming more or less until August, when No. 2 will be a mass of small purple bloom all around us here. As an afterthought I also enclose another variety now in flower, which I number 3, and is the light-coloured or pink bell flower; the deep purple one being No. 1. Please say:—1. If any of the three specimens is the true "ling" heather, *Calluna vulgaris*, and if not, are they of much value for honey? I never get much honey in supers; I fancy the bees store most of it in body-boxes for winter. 2. Would it be advisable to stimulate the bees with syrup during the last fortnight of July to get them strong for the heather flow? Or (3) should not the heather which is now in flower and keeps in flower until No. 2 is in full bloom be sufficient to keep the queen up to full laying strength? The rocks and hills will be purple with the bloom of No. 2 in about five or six weeks time, weather permitting should we not get some surplus.—Light, Point Lynas, N. Wales.

Reply.—Regarding the sprigs of heather sent, No. 1 is *Erica cinerea*, or bell-heather. No. 2 is the true "ling" (*Calluna vulgaris*), and No. 3 the *Erica tetralix*. The value of each as bee forage is very different, No. 2 being by far the best of the three for its honey-yielding qualities. No. 3 is not valued by bee-keepers at all.

[3347.] *Bees Deserting Hive.—Strong Swarm in Hollow Tree.*—Looking into one of my hives in the latter end of June, which, when I put the sections on some time before, was well filled with brood and honey, I found that the bees had completely deserted it, and disappeared entirely, and on making inquiries I find that they must have come out three days before. The combs appeared perfectly healthy when examined, but there was no honey, and only a very little brood in them. 1. In view of this, would you advise me not to use the drawn-out combs for another hive? 2. Will the hive be safe to put another lot of bees into? 3. I should like to know the cause of desertion. 4. Would you also tell me if it is possible to entice a swarm out of a hole in a hollow tree? I discovered the runaways on Sunday whilst walking round the farm with my father. I believe they must have taken possession of the tree within the last two or three days. I send name for reference, and sign—H. A. M., Cringleford.

Reply.—1. The particulars given above point to its being a case of bees deserting hive either because of the stores running out, or of some mischance having happened to cause death of the queen. If no eggs were seen in cells, the latter appears to be the most probable cause, as queens do occasionally take a flight in spring. 2. Quite safe. 3. You cannot "entice" a swarm out of a hollow tree; the only way is to get at the bees and combs, if possible, by removing a portion of the tree, or by cutting the latter down, and removing bees and combs by cutting out the latter piecemeal.

[3348.] *Drones Cast Out in May.* I have for some time been watching my hives closely for the appearance of drones, and on June 8 I found about two dozen drones dead outside, and several crawling about on the ground. In the evening I should think there were a

hundred cast out. They seemed to come out of the hive, and on starting to fly fell down. I have three stocks. Early in the year I lost one with paralysis and dysentery, later on another was attacked with same complaint, but I took all food away and treated as a swarm; I am glad to say they are all right now, and doing well. I forgot to mention the hives the dead drones are from are very strong, bees in one on eleven frames, the other on ten. I placed section racks on both in first week of June. If you can tell me the cause of the drones dying I shall be much obliged.—ALUM BAY, I. of W.

REPLY.—On the face of it, we should say the cold weather in early June, and no honey obtainable outside in consequence, has caused the drones to be killed off by the bees, because of threatened scarcity of food. Assuming this to be so, the present good bee-weather will soon restore the strength of the colony, and the loss of drone-life will be rather beneficial than otherwise.

Bee Shows to Come.

A nominal charge of 2s. 6d. is made for notices (not exceeding 7 lines) in this column, 10 lines charged 3s. 6d., up to 15 lines 5s., which covers cost of insertion from order till date of show. Cash should accompany orders for insertion.

July 18, at Ashby-de-la-Zouch, Leicestershire.—Show of Bees, Honey, and Appliances, in connection with Annual Flower Show. Three open and two local classes, and one L.B.K.A. Bee demonstrations. Schedules from J. H. Dunmore, Secretary, Alandale, Ashby-de-la-Zouch. **Entries Close July 16.**

July 19 and 20, at Gainsborough.—Show of Honey, Hives, and Bee Appliances in connection with the Lincs Agricultural Society. Bee Department under management of the Lincs B.K.A. Fourteen classes. Liberal money prizes and silver medals. Schedules from R. Godson, Hon. Sec., Lincs B.K.A., Tothill, Alford, Lincs. **Entries closed.**

July 25 and 26, at Cardiff.—Annual Show of the Glamorgan B.K.A. in connection with that of the Cardiff and County Horticultural Society. Honey, Wax, Appliances, etc. Classes for members, novices. Five open classes, with prizes for sections and Bee-appliances, 30s., 15s. Entry fee for one or more of the open classes to non-members, 2s. 6d. Schedules from Wm. Richards, Hon. Secretary, The Red House, Gabalfa, Cardiff. **Entries close July 20.**

August 1, at Henbury, near Bristol.—Annual Show of Honey and Wax, of the Henbury District Beekeepers' Association, with bee lectures, by County Council's expert, in connection with the Horticultural Society's Exhibition. Open classes, good prizes (classes with free entry). Apply Hon. Sec., J. Atkin Waller, Pen Park, Westbury-on-Trym, Bristol. **Entries close July 25.**

August 1, at Bishop's Stortford. Honey Show in connection with Bishop's Stortford Flower Show. Open classes. Schedules from W. J. Kitson, Stansted, Essex.

August 1, at Upwell, Wisbech. Horticultural Society's Show. Open classes for Honey, including gift class for 1lb. jar. Schedules from Hon. Sec., J. Hy. Inman, Upwell, Wisbech. **Entries close July 28.**

August 6 (Bank Holiday), at Melton Constable Park. Annual Show of the North Norfolk B.K.A. Schedules from C. J. Cooke Edgefield, Melton Constable. **Entries close July 28.**

August 8 to 10, at Middlesbrough.—Show of Honey, etc., in connection with the Royal Yorkshire Agricultural Society. Schedules and form of entry from John Maughan, Secretary, Blake-street, York. **Entries closed.**

August 8, at Clevedon, Somerset, in connection with the Horticultural Show.—The Somerset B.K.A. will hold its first annual Honey Show as above. Several open classes. Schedules from Louis E. Snelgrove, Hon. Sec., Cromla, Locking Road, Weston-super-Mare. **Entries close July 21.**

August 9, at Abingdon Park, Northampton. — Honey Show of the Northants B.K.A. Special prizes, including the Baroness Burdett Coutts' prize hive for cottager members, also three open classes, including one for single 1-lb. jar honey. (**Entry free.**) Prizes, 20s., 10s., 7s. 6d., and 2s. 6d. Schedules from R. Hefford Hon. Sec., Kingsthorpe, Northants. **Entries close August 3.**

August 9, at Madresfield, Malvern. — Annual Show of the Worcestershire Bee-keepers' Association. Open class. Schedules from Mr. Geo. Richings, 2, Shrubbery Terrace, Worcester.

August 16, at Yetminster, Dorset. — Annual Show of the Yetminster and District B.K.A. held in a field kindly lent by Mr. Jolliffe. Four open classes, including three 1-lb. jars extracted honey, three 1-lb. sections, and cake of beeswax. Schedules from G. Leeding, Hon. Sec., Bradford Abbas, Sherborne. **Entries close August 10.**

August 17. — In Public School, Fort William. — Honey Show in connection with the Horticultural Society. Classes for sections and extracted honey, open to amateur and cottagers. Challenge class (open to all) for three 1-lb. jars extracted honey; prizes, 20s., 12s., 8s., and 4s.—Schedules from Secretary, Horticultural Society, Fort William, N.B.

August 24, at Exeter.—Annual Show of the Devon B.K.A., in conjunction with the Devon and Exeter Horticultural Society. The Baroness Burdett-Coutts' prize, hive for the best exhibit shown by cottager members; Dr. Philpott's prize of £1 1s., for the two best sections of comb honey. All open classes. Schedules from the Hon. Sec., A. S. Parrish, Heavitree Road, Exeter. **Entries close August 18.**

August 29, at Chester.—Cheshire B.K.A. Show in connection with the County Agricultural Society. Open classes for Hives, Observatory Hives, Sections, and Extracted Honey. Baroness Burdett Coutts' prize hive for best exhibit shown by cottager member. Seven classes for members. Schedules from T. A. Beckett, St. Werburgh Chambers, Chester. **Entries Close August 8,** or at double fees, **August 15.**

August 30, at Montgomery.—Honey Show in connection with Horticultural Exhibition. Two open classes for six 1-lb. sections and six 1-lb. jars extracted honey. Prizes, 10s., 5s., 2s. 6d. Entry fee, 1s. each class. Schedules from Mr. W. J. Jones, Secretary, Montgomery. **Entries close August 23.**

September 8, at Dumfries.—South of Scotland B.K.A. 14th Annual Show of Honey, Bees, and Appliances. Five open classes—viz., three 1-lb. jars, three 1-lb. sections, and for single jar and section (free entry), and cake of wax; also handsome money prizes and valuable medals, for members only. Schedules from Jas. Johnstone, Sec., Nelson Street, Maxwelltown. **Entries close September 1.**

September 13, at Castle Douglas.—Honey Section, Dairy Show. Liberal prizes. Five open classes—viz., three 1-lb. jars, three 1-lb. sections, single jar, single section, and for cake of beeswax. Schedule from Jas. Johnstone, or from L. Aird, Hardgate Schoolhouse, Dalbeattie. **Entries close September 1.**

September 8 to 15, at the Agricultural Hall, London.—Honey Show in connection with the Confectioners', Bakers', and Allied Traders Annual Exhibition and Market. (See large advertisement on page i.) **Open to all British Bee-keepers.** Entry fee in each class one shilling. Schedules from

H. S. Rogers, Secretary, Exhibition Offices, Palmerston House, Old Broad Street, London E.C.

September 20, 21, and 22, at Crystal Palace.—Surrey B.K.A. Annual Exhibition of Bees, Honey, Wax, and Appliances, etc. Twenty-six classes (ten open to all). Increased prizes and medals. Schedules from F. B. White, secretary, Marden House, Redhill, Surrey. **Entries close September 1.**

September 22 to 29, at the Agricultural Hall, London.—Honey Show in connection with the Twelfth Annual Exhibition and Market of the Grocery and Kindred Trades. Nearly £50 in prizes for honey and beeswax including four prizes of £4, £3, £2, and £1, in honey trophy class. **Open to all British Bee-keepers.** Schedules from H. S. Rogers, Secretary, Exhibition Offices, Palmerston House, Old Broad Street, London, E.C.

September 26, at Altrincham.—Show of Honey Products, in connection with Altrincham Agricultural Show. Open to United Kingdom: Classes for Hives, Observatory Hive, 12 Jars Extracted Honey. Open to County of Chester only: Classes for Trophy, Amateur-built Hive, Two Shallow Bars, 12 Jars Run, 12 Sections, Wax, etc. Special classes for cottagers. Special classes for Society's district. Liberal prizes. Low entrance fees. Schedules from Mr. J. H. Hall, 2, Dunham Road, Altrincham. **Entries close September 9.**

October 9 to 12, at the Agricultural Hall, London.—Show of Honey and Bee Produce in connection with the British Dairy Farmers' Association. Numerous and liberal prizes for honey, etc., including the valuable Silver Challenge Cup of the B.B.K.A. Schedules from Mr. Wm. C. Young, Secretary, 12, Hanover Square, London, W. **Entries close September 12.**

Echoes from the Hive.

Douglas, Isle of Man, June 29. — Since writing you rain has done wonders on the island, and I noticed to-day bees working on the clover. But I find we are nearly two weeks later here than in the South of England. I think we can claim to have a longer honey-flow, and I never got such good results from my bees till I settled here. With young queens, each stock gives a good account of itself; and another good thing I have never seen honey-dew here.—THOS. J. HORSLEY.

Notices to Correspondents & Inquirers

J. W. (Blackhill).—Insurance for Bee-Keepers.—1. The policy of insurance referred to only covers risk of damage done by bees within a given area. It would, we fear, be impracticable to arrange a scheme for covering risks in taking bees to and from the moors. 2. Correspondence on insurance matters should not be addressed here, but to the B.B.K.A., 12, Hanover Square, London.

W. SOUTHCOTT (Honiton).—Pickled Brood.—1. To give you "the cause, symptoms, and cure of pickled brood" is quite beyond the limits of this column. Several pages of the B.B.J. have been devoted to the subject, and you should look up the matter for yourself in back numbers. 2. The title of the article headed "Hutchinsonia," by our contributor "D. M. M.," is explained by himself.

W. J. F. (Brilley, Yorks.).—Re-queening Stocks.—1. Early autumn is a favourable time for re-queening, as it affords a chance of young bees being raised before the bees are packed down for winter. 2. The names of makers of "weed" foundation appear in our advertisement pages.

J. B. R. (Bramhall).—Bee Nomenclature.—The bee sent is commonly known as the sand bee, from its burrowing holes in sandy places and depositing therein its larvæ for hatching out in due course. Particulars regarding its natural history will be found in Mr. Sladen's articles on "Our Wild Bees," published some time ago in our pages.

NUCLEUS (Birmingham).—Forming Nuclei.—This cannot be done on the plan proposed. It must be done on orthodox lines, if at all, from such directions as are given in the "Guide Book," or in Mr. Sladen's recently published paper on "Forming Nuclei" in the *B.B.J.*

HONEY (Larkhall, N.B.).—Dark-Coloured Honey.—The dark colour of sample sent is attributable to the source from which the honey came. If oak trees are plentiful in your district there may be honeydew in it; the flavour, however, is fairly good. We do not trace any sign of hawthorn honey in sample.

R. MONCRIEFF (Derby).—Honey Vinegar.—To make honey vinegar on proper lines you should read the Rev. G. Bancks' booklet on the subject. From simple fermentation of honey and water, is very well in its way, and a fairly good vinegar sometimes results; but honey vinegar for the show-bench needs more than this.

D. S. (Colmonell, Ayrshire).—Dealing with Foul Brood.—1. We are unable to give you the address of Mr. F. Lyon, who advertised in B.B.J. seventeen years ago. 2. The remedies sent out from this office are not sold as cures, but "remedies," and, if properly used, are effective for the purpose.

T. S. (Clay Cross).—The Sweet Bay Tree.—1. We are trying to get reliable information regarding the tree you name as above for next week's issue, to which please refer. 2. If you will send name of maker of foundation used we will reply to query in print.

W. J. B. (Newport, Mon.).—Foundation in Bell-Glass Super.—These supers are now seldom used, but in former days—before foundation had reached its present make and form, it was customary to attach small pieces of clean worked-out comb to the zinc tube, with which each glass was furnished for ventilation purposes. This gave a start to the bees in comb-building. In later days the bee-keeper fixed strips of foundation to the surface of the glass by warming the latter, so that bees might cluster without difficulty in the glass and start work therein.

Suspected Combs.

H. WEBBER (Surrey) and M. D. C. (Chislehurst).—Samples sent contain foul brood of old standing.

BEGINNER (Swanley Junction).—There is no sign of brood (foul or otherwise) in sample sent. The combs, however, are black, thick with age, shapeless, and distorted—drone-comb predominating—and quite un-

fit for use in a hive. They should be cleared out and replaced with clean, straight, worker-combs.

E. M. A. (Colchester).—Foul brood is developing in comb sent.

J. W. (Seaton Carew).—There are slight signs of foul brood in two cells of comb sent, but the disease appears to be quite in the incipient stage, and rest of sealed brood is in normal condition, and apparently all right. We should leave the stock as it is, to do its best till the season is over. "Fanning at entrance" is, at this season, rather a sign of prosperity than otherwise.

Special Prepaid Advertisements.

Twelve words and under Sixpence: for every additional Three words or under, One Penny.

Advertisements for current Issue must be received by first post on Tuesday.

STOCKS IN SKEPS, 1906. Fertile Queen, 12s. 6d.; ditto on three standard frames wired, 11s. 6d.; ditto with Sladens direct Golden Prolific 1906 Queens, 15s. 6d.—W. WOODS, Normandy, Guildford. Q 97

THREE FRAME NUCLEUS, with 1906 laying Queen, 10s. 6d.—A. J. BUTLER, F.R.H.S., Westville, Scotter, Lincoln. Q 96

READY for Delivery, healthy FERTILE QUEENS (1906), 3s. 6d., in introducing cages, post free.—CARBINES, Bee Expert, Cardinham, near Bodmin, Cornwall. Q 95

WANTED, HONEY RIPENER and DRAINER, perfect condition. — Particulars, CLARK, Boarbank, Grange-over-Sands. Q 94

STING PROOF GLOVES, 2s.; with sleeves, 2s. 6d., post free. Why pay more?—KENT, Manufacturer, Dorchester Q 93

50 STANDARD SHALLOW FRAMES, clean, extracted combs, guaranteed healthy, 6d. each. HARRIS, Wavendon, Bletchley, Bucks. Q 92

RELIABLE QUEENS, 1905, 3s. 6d. each.—WILKES, 29, Addison Road, King's Heath, Birmingham. Q 83

QUEEN FOR SALE, now laying, 4s.—H. E. HALL, 14, Park Street, London, N. Q 91

TILLEY'S PATENT ("Won't Leak") SECTIONS, sample 6d., post paid. Complete Super, 3s. 6d., on rail.—J .T. GODWIN, Agent, Dorchester. Q 90

BROTHER BEE-KEEPERS visiting Cornwall, please note, APARTMENTS.—BEST, Trewoon Apiary, St. Austell. Q 89

TWO STOCKS LIGHT COLOURED BEES, in standard frame hives, zinc roofs; also three empty hives, all in excellent condition, the lot £5; one large Geared Extractor and one Ripener, little used, £2 15s.; one Parishes' Water Jacket Food Cooker, very useful for boiling up food for dogs or poultry, £2.—Write "SPRINGHAVEN," Wickham Road, Sutton, Surrey. Q 88

A NOVELTY.—AUTOMATIC MINERAL WATER MACHINE, delivering bottle for one penny; made to hold from one to six dozen. One has been in use five years. Price according to size.—Apply H. HAWKINS, Burgheath, near Epsom. Q 87

HONEY EXTRACTOR, 10s. 6d., cost 25s.; large Wax Extractor, 8s. 6d., worth 12s. 6d.; both new; genuine bargain; free on rail.—HEWETT, Ironmonger, Alton, Hants. Q 86

FINEST ENGLISH HONEY, 16s. per 28 lb. tin; sample, 2d.—DUTTON, Terling, Essex. Q 85

LIGHT EXTRACTED HONEY, in 28 lb., 14 lb., and 7 lb. tins, at 6d. per lb.; sample, 3d. Cash with order.—CHARLES H. BOCOCK, Ashley Apiaries, Newmarket. Q 84

QUEENS, Specially Selected for honey gathering, fertile, in introducing cage, 2s. 8d., post free.—CHARTER, Tattingstone, Ipswich. Q 98

TON WHITE CLOVER HONEY, 52s. 6d. cwt.; in S.C. jars, 8s. doz.; sample, 2d.—CHARTER, Tattingstone, Ipswich. Q 99

HALF TON splendid Light English New WHITE CLOVER HONEY, £3 per cwt. Sample 3d.—ALBERT COE, Apiary Hall, Ridgewell, Halstead, Essex. Q 76

IN one of the prettiest villages in East Devon, on a Bee farm; FURNISHED APARTMENTS.—SOUTHCOTT, Gittisham Apiary, Honiton. Q 73

FOR SALE, 20 stocked Carniolan HYBRIDS, each on eight frames, Abbott's pattern, six of brood; all combs wired and worked from full sheets.—T. W. SHAW, Eden House, Sedgefield, Co. Durham. Q 74

EXTRACTED HONEY, 6d. lb.; 28 lb. tins. Sample 3d. Large number of Section Crates for Sale, 1s. 9d. each.—LING, Shady Camp, Cambs. Q 70

HOLIDAYS.—Cornwall; delightful situation near sea and Land's End; 30s. — S. HARBORNE, Apiary, St. Bunyan, R.S.O. Q 69

NEW SECTIONS FOR SALE. NEW SECTIONS.—J. P. FISON, Holmingsea Apiary, Cambridge. Q 67

PURE EXTRACTED HAMPSHIRE 1906 HONEY FOR SALE, 28lb. tins, 56s. per cwt. Sample 3d. Cash or deposit.—A. GREEN, Tangley, Andover. Q 66

STRETCHING and SAGGING of FOUNDATION prevented by simple device. Sample seven stamps. Full set for frame, 1s. 1d.—W. PALMER, 5, Clarence Place, Croft Street, Newcastle-upon-Tyne. Q 65

QUEENS (celebrated Doolittle strain of Improved Italians).—A customer writes: "The virgin I had from you last year has done splendidly. Stock now on 33 Standard Frames." Virgins, 1s. 6d.; Fertiles, 5s. Safe delivery guaranteed. First come, first served.—DAVID TAYLOR, 1, Ilminster. Q 64

COMFORTABLE APARTMENTS for Brother Bee-keepers visiting Douglas. Terms: Tea, bed, and breakfast, 3s. 6d; or full board, 5s. per day.—MORSLEY'S, Merridale House, top of Castle Drive, Douglas, Isle of Man.

AN ENGLISH BEE-KEEPER, of wide experience, seeks an ENGAGEMENT in a warmer climate.—Address "APICULTURE," "B.B.J." Office.

WANTED, SECTIONS, first quality; prompt cash; also extracted per cwts.—W. CHILTON, Brookside, Polegate, Sussex.

29TH YEAR.—Queens: Imported Italians, 6s. 6d.: Home-raised Italians and Carniolans, 5s. 6d.: British, 4s. 6d. each. Also Swarms and Nuclei.—F. WOODHAM, Clavering, Newport, Essex. Q58

WORTH A GUINEA A HIVE.—"Never Swarm System," 3½d., free. "Never Swarm" Hives, best, most complete made, 22s. 6d.—HARRIS, Wavendon, Bucks. Q 49

7S. 6d. HIVES. 7s, 6d.—The Bee-keeper's Opportunity. Standard size, with super complete, painted. Illustration sent. — OXONE APIARY, Trimingham, Norfolk. Q 47

WANTED, 1-lb. SECTIONS NEW HONEY.—Price and particulars to T. G. TICKLER, Pasture Street, Grimsby. Q 44

NEW SECTIONS. HONEYCOMB.—Supplies wanted, at once.—SMITH, Cambridge Street, Hyde Park. Q 29

Editorial, Notices, &c.

THE "ROYAL SHOW" AT DERBY.

(*Continued from page* 262.)

The time at our disposal last week—before dispatching our notes on the "Royal"—precluded more than a few brief lines on the show as a whole; but later on we had full opportunity for observing the keen interest taken in the bee department by the enormous crowds of visitors on the last two days, and the contrast to "Park Royal" was remarkable. At the latter show the sparse attendance and the apathy of visitors was chilling in the extreme, while at Derby, on the last two days, no sooner was the bee tent erected and the lecturer ready to begin than the crowd surrounding the enclosure was so great that Mr. Herrod could hardly make himself heard at all. Indeed, the whole of the bee department was well attended, and keen interest taken in the exhibits by numerous visitors, till the show closed.

With regard to the exhibits, the first place must, of course, be given to Class 418—*Collection of Bee Appliances* (6 entries). Very large collections were staged, all of which were good, and showed an advance in the quality of goods shown and the effects of keen competition among our leading manufacturers. The awards in each case were well merited, as they appear in prize list last week.

Class 419.—*Complete Hive for General Use* (14 entries).—The first prize went to Messrs. Abbott Bros. for what the makers term a "New Model W.B.C. Hive," and an excellent "model" it is, as we can testify, in view of the many faulty hives on the market bearing those much-abused initials. Mr. S. P. Soal took 2nd prize for a strong, well-made hive constructed of much heavier timber than that generally used. It will meet the views of those who prefer strength to lightness in handling. Mr. W. P. Meadows secured 3rd with a good hive, priced 30s. We were glad to note that the higher awards both went to hives costing only 24s. each.

Class 420.—*Frame-Hive for Cottagers' Use* (7 entries).—Here again the judges' awards went in favour of heavy timber in hive-making, Mr. E. H. Taylor taking 1st for a strongly-built dove-tailed hive of heavier wood than we should care to use, and remarkably cheap at the price (10s. 6d). Mr. Soal again secured 2nd, with a strong hive to which the same remark applies. Messrs. Jas. Lee and Son and Abbott Bros. were awarded 3rd and h.c. respectively for good hives much lighter in make and well-known to bee-keepers.

Class 421.—*Honey Extractor* (5 entries).—The machines shown in this class were good, but Mr. Meadows easily secured the honours without much competition.

Class 422.—*Observatory Hive with Bees and Queen* (10 entries).—The prize list printed last week gives full merit in every case where deserved. A few of the observatories were badly staged so far as regards either ventilation, provision against chilled blood, or shortage of food supply, but the others were very good.

Class 423.—*New Appliances Connected with Bee-keeping* (6 entries).—No award made. We confess our inability to entirely concur in the above verdict, though in most cases it was fully justified.

The remaining classes—apart from bee-produce—may be summed up by saying that in Classes 440 and 441 the awards were, to our mind, well placed and well earned.

The honey section was very good indeed, considering the early date on which the "Royal" Show is held. The display, as a whole, was the best we have seen for some time. The division of the whole country in two groups (North and South) appears to work out more satisfactorily than the former grouping of counties. The 14 classes for honey and wax produced an aggregate of 154 entries, and was keenly contested. We close by congratulating the B.B.K.A. on the complete success of the Royal Show of 1906, which augurs a new career of prosperity for all concerned.

Mr. W. Broughton Carr conducted an examination of seven candidates for the 3rd class certificate of the B.B.K.A.

HONEY IMPORTS.

The value of honey imported into the United Kingdom during the month of June, 1906, was £5,213.—From a return furnished to the BRITISH BEE JOURNAL by the Statistical Office, H.M. Customs.

Correspondence.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

AMONG THE BEES.

SOME CURRENT TOPICS.

[6357.] How magical a change the genial heat of summer, with a nice flow of nectar, works on the energy and activity of an apiary. Up till then there has been no craving call for undue haste and bustle. Bees have taken business in a free-and-easy way, or

leisurely rolled home with pellets of pollen of many hues. But it was all done deliberately. Now all is haste and hurry—a kind of eager scramble goes on; each little worker is so intent on duty that it has no time for idle dalliance or loitering by the way. Its outward track is direct, and its motions full of life. Its homeward journey speaks tellingly of a deliberate purpose, which brooks no delay in its fulfilment. Duty's call must be obeyed. Nectar has to be gathered now, or perhaps never, because the future conditions may be unpropitious. So, at it every eager bee goes improving each shining hour, as if it were its last on earth, storing away, too, not for itself, but for future generations.

Caught Napping.—I must confess that for once my system of never feeding has been found wanting. This, if ever, has been a season when a certain amount of systematic feeding would have been worth twenty times the cost to many bee-keepers. At the present time my bees are something like a month behind, and very few colonies will be in a fit condition to make anything like a profit out of the clover flow. Strong nuclei lots would have the pull of most of them, and give a better return with a good season. Most colonies may be in fit condition for the heather, but that crop has been uncertain for so long that it is idle to count on it for very much. Meanwhile the summer is passing, and at the end of June no supers were placed on hives, as only a small minority show any bees on outside combs. A few days, however, may make a magic change.

Nuclei.—This is the season when this operation is in full swing. It almost seems as if baby nuclei may prove at least a semi-failure in our fickle climate. I should like to recommend amateurs to follow the teaching advocated in Chapter IV., Mr. Staden's "Queen rearing in England," an excellent little work, by the way. Any novice can successfully carry out this plan and rear queens equal to the best as honey-gatherers at very little outlay. Cut out the finest of these cells when almost ripe, taking care not to press or injure the cell; hang it in a spiral wire protector in the hive you wish re-queened, and you can count on success. The best time to do so is on or about the seventh day after swarming. If desired, several of these may be placed in the new hive till they hatch, and then, if the weather is bright and sunny, a week in the small colonies should secure mating. If only a limited number should be required, the larger nuclei lots make security doubly sure.

The Magic of Change.—Bee-keepers have no doubt noted that bees changed from one locality to another in early spring, as I noted lately, seem to benefit by the change, and work with a new energy. I have noticed the same in making minor changes. A queen shifted from one hive to another gives the bees of the latter a new stimulus, resulting in better work. A shift into a new hive, and especially when the bees are placed in new combs, frequently brings about a transformation. A queen got from the South and safely introduced at the right time wakens even a dull colony into new life. Here, however, is a case which is somewhat a mystery to me. An old queen at the head of a colony shows evidently failing powers, so that the bees resolve on swarming, and carry out their intention. That queen in the new hive goes at it as if she were the most prolific mother, filling every cell almost, with only worker eggs. She may—likely will—fall off suddenly later, and in all probability be superseded by the bees in autumn as a spent force; but the fact remains that for weeks she goes on laying as if she were in her prime.

Prevention of Swarming.—Three things have been borne in upon me lately in moving out and in among bees and bee-keepers. 1. So-called non-swarming hives, after a season or two, become normal hives by the utter neglect of the special chamber below the brood-frames. Their owners cease to reckon on them as aids to swarm-prevention, and disregard their existence. 2. The plan of working a set of unfinished frames in front of regular brood-body is falling into disuse, as it too often proves an illusory swarm-preventor. A professor wrote of it the other day: "The system was tried with five hives, and all the five swarmed! 3. Swarm-catchers and kindred appliances are being consigned to the bee museum, as they have, year after year, proved a delusion and a snare. I should like to say a favourable word of all three, but, after mature deliberation, I have no good word to say.—D. M. M., Banff.

TWO QUEENS IN ONE HIVE.

THE "ROYAL" SHOW, ETC.

[6358.] I have noticed that when two swarms are hived in one skep (a thing which often happens to cottagers) each swarm will take a side and build comb until they meet, when, I suppose one of the queens is dethroned, though I have sometimes, when driving such skeps in the autumn, found two queens in one skep.

I enjoyed my look round the hive department of the "Royal" Show, and very much admired the way in which Mr. W. Herrod delivered his lectures. There was no sticking fast or hanging fire, but just a steady

flow of information which every one could hear, no detail being missed out or slurred over.

I exhibited a hive of my own make and style of working bees, and, though not successful in winning a prize, was not surprised or disappointed when I saw the prize hives of Messrs. Abbott, Meadows, Soal, etc., and noticed how beautifully finished off they were, one of them being dovetailed more like a cabinet than a bee-hive. I have all sorts of hives in my apiary, holding from ten to eighteen frames, and after many experiments am egotistical enough to believe that my hive of ten frames, hanging at right angles to the entrance, is the most useful of all, because it can be worked for comb and extracted honey, for swarming, or non-swarming.

I have worked my bees for many years on the plan described by Mr. Alexander on page 202, B.B.J., May 25, 1905, and I never use shallow-frames. My method is to put on a rack of sections. When the hive is nearly full of bees, when the sections are about half-full, I take off the rack and place another hive over the lower one, leaving the queen on one frame of brood below, and filling up with nine empty combs or sheets of comb foundation, with excluder between the two hives. The second story, or "double," thus holds the nine frames of brood, to which a frame of comb foundation is added, and the rack placed on the top. This gives the queen nineteen frames for egg-laying, and wholly prevents any intention of swarming. As the brood hatches out in the top chamber the combs are filled with honey; and so good, tough combs are obtained for extracting. The chief advantage this plan has over shallow-frames is that these combs can be used for driven bees, or they may be stored for using for the same purpose again.

If the queen happens to be an unusually prolific one, an extra "double," or racks may be used. For re-queening purposes it is a good plan to make a nucleus from each hive, and add it with its young queen to the parent stock in the autumn. Some consider this an extravagant method of re-queening, but if the nucleus is formed when the honey-flow is half or nearly over, the loss of three frames of brood at that period make little difference to the yield of surplus, and are of considerable value when returned in the autumn full of young bees, because the old bees, after a hard summer's work, are dying off very rapidly just then. It will thus be understood from the above remarks that a rack of sections, ten standard frames of sealed honey, and a nucleus may be secured from one hive by my method of working. I have occasionally secured twenty sealed standard frames, but the former is usually about the average yield, and it is absolutely necessary to have young queens. A hen begins to fail rapidly after the second season, and so does a queen. Although bees are supposed to supersede their queen when necessary they often do not do it until she is completely worn out.—AMATEUR, Cheltenham, July 9.

THE B.B.K.A. INSURANCE SCHEME.

[6359.] I support Mr. Geo. Saunders's suggestion (6355) that the insurance period under the B.B.K.A. scheme should be from January 1 to December 31. The present arrangement under which the period commences on August 1 is by no means a convenient one, and entails unnecessary labour on the secretaries of the associations. What happens, according to my experience, is this. Many applications are made about the date of the commencement of the period; dilatory members continue to apply from time to time during the following three or four months; the issue of the annual report in the early part of the year stirs up two or three more; then the expert's advice leads to some further applications in April, May, and June, and in regard to them one is never quite certain whether the applicant understands that the date of the expiration of the period is July 31, or is under the impression that the payment of the premium will safeguard him for twelve months. Subscriptions usually become due on January 1, and I am certainly of opinion that it would be an advantage if insurance premiums became payable on the same date. I should like to suggest also that the proposal form should be altered so that an applicant should not be deprived of the copy of the regulations when he fills up the proposal form. This is the case now, because the regulations are printed on the back of the forms. It would be much better for the insurer to be able to retain the copy of the regulations for reference.—EDWARD CHARLEY, Hon. Secretary, Cheshire B.K.A., July 7.

THE SWARMING FEVER.

CAN IT BE CHECKED?

[6360.] I have a small apiary of eight hives located two miles from home. All were re-queened last autumn, one working in sections and on seven shallow-frames. Each hive has already stored, say, 35 lb. or 40 lb. of surplus honey up to the present time, and we are just in the height of the honey-flow. Three of the stocks have sent out huge swarms, and all of these have decamped and been lost, and the other four may go any time. I have been careful to give "room in advance." My hives have a ventilating hole in floor-board. I have lifted up the front of hive 1¼ in., and have

taken every precaution I am acquainted with to check swarming, but in spite of all I have failed in my object. Now I am searching my pile of B.B.J.'s for a back number with information on this point. I find I have lost or lent the number containing Mr. Rymer's method, and I will thank you to send me same at your convenience. Our good and worthy bee-brother, "D. M. M.," Banff," in June 22, 1905 issue (pages 241 and 242) gives a simple method, and I would be greatly obliged if he would kindly say how long approximately a young queen would take to fill the lower chamber containing one frame of bees with queen, and, say, eleven frames of foundation, so that one could form an idea when to commence operations. In my own case I should prefer to shake bees from standard frames in top chamber, and remove same bodily, then replace with two crates of shallow-frames, the top one containing drawn-out combs and the lower one foundation, and leave until the flow ceased, and extract. Perhaps he would favour me with his valuable opinion.—ARTHUR H. WILKES, Four Oaks, Birmingham.

QUEENS NOT TAKING WING.

[6361.] In thanking you for reply to my query in B.B.J., I send particulars of a little incident which happened recently in connection with one of my queens, and I thought it might possibly be of interest to your readers. I had a "cast" from one of my hives on June 30. I got the bees into a skep, but afterwards returned them to the hive they came from. In doing this I threw the swarms out on to a board placed in front of the hive, and while watching noticed that the bees were a bit slow in running in. Presently I turned my head and saw about a dozen bees on my shirt-sleeve, and among them was the queen-bee. She must have flown on to the place where I noticed her, so I moved my sleeve a little, and held my arm near the board, when the queen separated herself from her body guard of worker bees, one of which immediately flew on top of the queen's back and seemed to pull her on to the board, and in a moment she ran into the hive. Is this a thing common in bee-life, or is it something new? I have never seen or heard of such a thing happening before. Another curious thing also happened with same queen. On the previous day to that mentioned above the bees came out apparently for swarming purposes, but the queen did not take wing along with the swarm; she only came out on the flight-board and ran all over the board, and while doing this some bees went under her while others ran over her—in fact, she had quite a field-day running over the board; but eventually she went back again into the hive without attempting to take wing, much to my surprise.—J. S., Newton Poppleford, Devon.

[It seems clear that the young queen referred to has for some reason a difficulty or disinclination to take wing; very unusual, so far as our personal experience goes.—EDS.]

DO STRANGE BEES JOIN A SWARM?

[6362.] "Hants Bee" last week (6346, page 255) raises the above query. I say "Yes, certainly they do." As a case in point: A stock of blacks I had just transferred from a skep swarmed out, and the wind carried them right through some eighteen stocks in full work. When I hived those bees they had not only increased in numbers, but I saw several golden workers and drones among them from one of my most populous colonies.

To pass to another matter. While watching an Italian bee working on the white clover, I was surprised to see that she crawled from head to head instead of flying. I watched her work on two or three heads in this way, and then, seeming to have got her load, she climbed to the top of a long stalk of grass. Here she moved her wing rapidly, and I saw she had but one. Poor little bee! Whether she had lost her wing since she left the hive or had crawled out (some two feet or more) to work, I cannot say, but it seemed to me remarkable, and rather pathetic, that a bee maimed in this way should undertake the duties of gathering honey. I put her back on the floor-board. She ran in, apparently quite insensible to her loss.—L. A. VIDLER, Rye, Sussex.

NOTES FROM WARWICKSHIRE.

[6363.] The weather has been very favourable here for bee-keepers, and, providing it keeps warm for another month, we shall have a very good year. The fields around are white with clover, and the lime trees covered with buds, which will be in full bloom in about a week. I may add that the clover and lime bloom are our chief honey source, and if it is bad weather when the last-named is out we fare very badly. Last year was a record harvest with me, and from one stock I took 170 lb. of extracted honey, while several other stocks averaged 100 lb. each. Is not this very good? May I also ask if any other Warwickshire bee-keepers have done better than this last year?—ENTHUSIAST, Stratford-on-Avon.

[Yes, very good indeed.—EDS.]

("*Correspondence*" *continued on page* 276.)

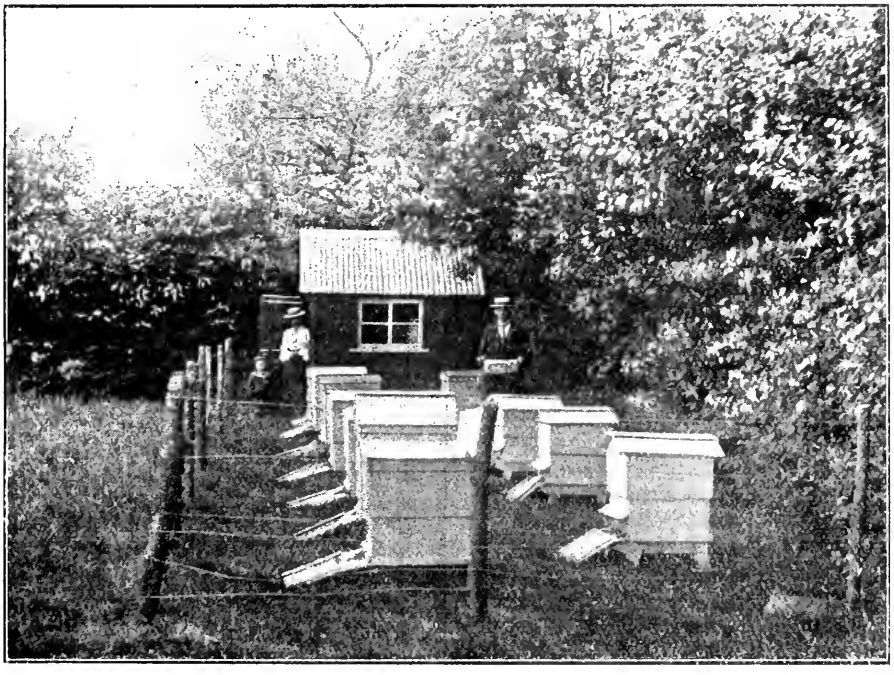
HOMES OF THE HONEY-BEE.

THE APIARIES OF OUR READERS.

Mr. Herbert Simmonds, whose apiary appears below, is another welcome addition to the long list of our readers who are gardeners by profession, and are also enthusiastic and successful bee-keepers. His bee-keeping experiences, written at our request, will be found both useful and interesting to JOURNAL readers. He says:—

"I commenced bee-keeping in 1895 through the influence of Mr. Ed. Stevens, of Latimer, Bucks, from whom I bought my first swarm and hive. He also lent me a copy of your "Guide Book," and helped me with advice in many ways. This swarm gave me twenty-one good sections that year, and I remember how proud I felt because I put them on the hives and took them off when full without any assistance. For a number of years my apiary increased very slowly, chiefly because of the hives being located in my very small garden. After settling down in Chipperfield in my occupation as gardener, I (through the kindness of a neighbouring farmer) placed my hives in a corner of a meadow quite close to my house. It is protected from cold winds by tall hedges, and there is abundant forage for the bees in the shape of fruit and lime trees, sainfoin, white clover, and charlock. I have never broken any records in "big takes" of honey, my largest lot from one hive being 110 lb.; but, up to the present, I have always managed to sell all the honey I can get at 8d. to 10d. a lb. retail for sections, and 8d. to 9d. for extracted honey. I make a point of telling my customers that honey is meant to be eaten as a food, and not stored away as a remedy for colds, etc. Last year I sold 540 lb. (nearly the whole of my harvest), taken from ten hives—spring count; I also increased my apiary, and have now seventeen hives. My only experience with foul brood occurred a few years back. I then purchased seven hives in the winter when it was impossible to examine them, which I freely admit was a risky thing to do, and when spring came I found one hive badly affected with foul brood, and four others slightly so. I immediately destroyed the worst stock, and made three stocks of the remaining six, burning the whole of the combs, and following directions given in "Guide Book" as to treatment. This completely stamped out the disease; but I would impress upon all beginners in bee-keeping to buy swarms and *new* hives if they wish to succeed.

My plan for keeping free from disease is to always use naphthaline in hives,



MR. HERBERT SIMMONDS' APIARY CHIPPERFIELD, KING'S LANGLEY, HERTS.

medicate all food with naphthol beta, give each stock two new frames in brood-nest every spring, taking out two of the oldest, and thus renewing brood-combs completely every few years. The figures seen in photo are my wife, with my three-year-old son, and myself. My wife does most of the bottling and labelling of honey, and helps me in the apiary in many ways, such as looking out for swarms, etc. I may say that I make all my own hives, and have won several prizes at local and other shows. I will now conclude these somewhat lengthy notes by wishing all bee-keepers a record season for 1906."

("*Correspondence*" *continued from page* 274.)

SWARMING VAGARIES.

[6364.] I sincerely sympathise with your correspondent (3343, page 266). If he had read the little booklet on "Never Swarm System" he would have avoided the trouble, as I had such cases in mind when first deciding to give my experiences in controlling swarming.

"*Nuclei.*"—This seems a specially good season for nuclei. I examined one on June 30, which had been made just over three weeks. There were five combs with brood, one patch of sealed brood being 10 in. long and 6 in. deep. This nuclei was one of three made from one lot. The queen was taken out with two frames of brood and given two empty combs, and now she has seven combs of brood, the bees well covering nine frames (no, not artificially swarmed!).

"*Queen-rearing*" (page 263, 6352).—My experience is that "very few bees do not suffice" to raise queens from the cells, as the royal brood gets chilled. Opinions differ and experiences vary; but my decided opinion is that swarming in any shape or form is out of date.—A. H., Wavendon, Bucks.

JUNE RAINFALL.

Total, 2.07 in.

Heaviest fall, .69 in. on 28th.

Rain fell on ten days. — W. Head, Brilley, Herefordshire.

Queries and Replies.

[3349.] *Introducing Queens.*—On April 28 I removed an old queen from a hive of hybrid bees, and on May 2 I introduced an Italian in a "Benton" mailing cage. Five days later I could see no eggs, nor the new queen, although the cage was empty, but found several sealed queen-cells. On May 16 I found all the queen-cells open, except one, which was still sealed. I was unable to see a queen. On May 23 I found the one sealed queen-cell just in the same state, and still no eggs; but the bees were balling a queen, which must have been one of those hatched before May 16, as at that date there was only one cell which was and still is sealed. I separated the bees twice, and each time the queen dropped into the hive. Eventually I found them balling her on the alighting board, where, on being captured and examined under a glass, I found her wings had been nibbled so that I fear she is useless, unless she has mated. Would you kindly inform me:—1. Is she a virgin; and, if not, would it be any use to introduce her into another queenless hive? If so, would you kindly return her. 2. What was probably the reason of the bees' enmity to her (which was most determined); as I could see no other queen, and there were no eggs. Of course, the bad weather lately has been against mating? 3. When introducing a new queen in one of these mailing cages, after the bees have been at least three days queenless, should all queen-cells be cut out at time of introduction, or four or five days later? In the latter case, would not the bees destroy the other queen-cells, as soon as they receive the new queen, if they accept her? I enclose the queen in the cage that the other came in, and have put in some "special" candy. I enclose card for reference and sign—Kew, London, W.

Reply.—1. The queen has every appearance of being unmated, and in our opinion she has not been reared in the hive where found, but is a virgin queen that has entered the wrong hive after a mating flight. In any case, she would have been useless as a breeder after the severe "balling" inflicted on her by the bees. 2. As suggested above, it is likely she was an alien queen. 3. If an alien queen is accepted there is no need to trouble about queen-cells; the bees will settle that matter themselves.

[3350.] *Returning Swarms.*—One of my hives swarmed on June 10, and the swarm was put into a separate hive. On examining the parent hive, I found two queen-cells and left them, intending if a second swarm issued to restore it and to destroy the remaining cell. On June 23 I discovered a swarm in a small tree near the hive. They had made some comb on a branch, which I forward to you. Before returning it to the parent-hive, I removed seven queen-cells, six of which contained young queens. The seventh queen-cell was empty, but as a young queen was found dead outside the hive this morning, no doubt she had escaped when the queen-cell was cut out and had been killed by the queen of the swarm returned on the 23rd. Can you tell me:—1. Whether the swarm only emerged the day I found it, or must they have been there some time for the comb to have arrived at its present stage? 2. When a first swarm has left a hive, is it a good practice to leave all queen-cells until a second swarm issues, and then destroy any queen-cells before restoring the second swarm? The alternative process appears to be to cut all the queen-cells but one after the first swarm has left; but being only a beginner, I have been afraid of leaving the least advanced cell

and thus keeping the bees unsettled till she emerges. I may say that I began the season with two hives, and have now a swarm from each—one covering ten frames (swarmed May 27), and the other six.—A. H. M. T.

REPLY.—1. Judging by the slight indications of comb-building seen on branch of tree sent, the swarm had only been clustered for a few hours when removed. 2. The practice followed, after a swarm issues, depends on the bee-keepers' intentions. If increase is desired, the parent colony may be divided into several nucleus colonies and queen-cells utilised in various ways. Or all queen-cells removed but the most forward one. Sometimes the second swarm is returned the same evening and the young queens allowed to take their chance as to which kills the others off.

[3351.] *Virgin Swarms.*—Can you give me any reason for the following. Last Sunday week one of my two stocks of bees swarmed out of a skep which I was waiting to transfer into a frame-hive. At least two-thirds of the bees left with the swarm, which was safely hived, and in a day or so the queen had started laying in the new hive; then on the Thursday they swarmed again. I never heard of such a proceeding before, seeing that the bees seemed to have settled down after the first swarming. 2. I want to go in for the three examinations for certificates of the B.B.K.A. Will you kindly tell me where I can get particulars as to times of exams., books, etc. I believe there is no association for this county or any part of it.—(MRS.) D. E. ..., Sussex.

REPLY.—1. It is not often that a prime swarm, after being hived in a frame-hive, sends out a swarm the same year; but when it does occur, the swarm is commonly termed a "virgin swarm." 2. The particulars required may be had from the secretary of the B.B.K.A., Mr. E. H. Young, 12, Hanover Square, London, S.W.

[3352.] *Young Queens Starting to Lay.*—With reference to the sentence which appears at the commencement of chapter 22 of the "Guide Book," wherein we read:—"When a hive swarms, or loses its queen, a period of nearly three weeks generally elapses before eggs can be laid," I should be much obliged if you would kindly explain this. I ask:—Why should there be such a long interval in the case of a hive which swarms? I presume that in this case the young queen emerges from the hive on the fifth day to get fertilised, and ought to lay eggs at once. I therefore do not understand the interval of three weeks mentioned.—F. D. E., Bedford.

REPLY.—When a top swarm leaves the hive it is usually eight to ten days before a second swarm, or "cast," comes off, and, if the latter is returned to the hive, a second period of four or five days, or more, elapses before the young queen is fairly started on her maternal duties, so that the case, as stated in "Guide Book" is quite correct.

[3353.] *Increasing Stocks.*—I have found a few cells of foul brood in my best hive, but it seems to have yielded to treatment as per "Guide Book." The queen of the colony in question is, and has been, most excellent, and before she is damaged by age or disease, I am anxious to secure as many young queens from her as I can. Will you therefore kindly state (1) What is my best course at this time to this end? (2) Having had several slight cases of foul brood in my apiary, I am intending at the end of this season to remove old combs without brood, extract honey, place combs with brood at end, to be removed after hatching of brood, and replace old combs with new foundations, and feed with medicated syrup. Kindly state if this is safe and desirable as means of stamping out germs of disease. I send name, and sign.—Enquirer, Suffolk.

REPLY.—(1) Your best course will be to procure a copy of the book by Swarthmore, entitled "Increase," if sufficiently experienced to carry out the details given in dividing colonies and rearing queens. On the other hand, a simpler method will be found in the "Guide Book," showing how to form nuclei. (2) If the disease is in the incipient stage only, the plan you propose will be effective, but if the disease has reached the spore stage, your plan will extend the disease instead of curing it.

[3354.] *Swarms Decamping.*—Having been a B.B.J. reader for over a year without having noticed a similar case, I should be much obliged if you can account for the following:—On May 31 I bought a very strong swarm of bees, and the same evening they were put into a new hive. Next day I closed up the frames, and in so doing noticed that the bees were working well and seemed contented. Two days later I found four frames of comb practically drawn out, and bees busy, working hard and well. They seemed so strong that I gave them the full ten frames, as I was to be away from home for a month. That evening (June 3) I left England, only returning yesterday to hear that the bees had deserted in a body on Tuesday the 5th, and after clustering for a very short time on a tree near by, went off, and have not been heard of since! I must tell you that from the time the swarm arrived until the day the bees decamped, they were regularly fed with medicated syrup, ½ pint per day, so that it cannot have been of hunger swarm. Indeed, a few cells had pollen stored in them. I can, of course, see no trace of eggs, as the swarm left nearly a month ago. I have asked several bee-keepers, but they are also unable to account for the bees leaving after five days, and would be glad to hear of any possible cause. Thanking you in advance for a line of reply in B.B.J. I send name for reference, and sign.—G. H. P., Enfield.

REPLY.—If you are certain that the swarm was headed by an adult mated queen, we cannot account for the desertion. On the other hand, if the queen was a virgin, the subsequent decamping points to loss of queen on return from a mating flight.

[3355.] *Swarms from Suspected Hives.*—Referring to sample of comb enclosed, kindly reply in next issue of B.B.J. to the following queries:—(1) Why cells have not hatched? (2) What would you advise me to do with a

5½lb. swarm from a hive in which there are nearly a hundred such cells scattered over five or six combs? (3) How would you treat the parent hive mentioned above, seeing that it has bees in it now, covering eleven frames? The reason of its being strong is that a second swarm, after coming off in due course, returned to the parent hive on two successive days. (4) How would you treat a swarm that came from a hive in which I found a very few foul broody cells? (5) How, and how soon can one make sure whether a swarmed hive has a fertilised queen or not. Thanking you in advance for replies. I send name, and sign—A. X., Trewoon, Cornwall, July 2.

REPLY.—(1) The larvæ in four cells of sample comb sent have died simply from lack of warmth during the process of hatching. (2 and 3). Treat both swarms, and the parent hive as healthy, if the latter on examination is found to be as free from foul brood as sample of comb received from you. (4) Simply use preventives and keep a careful eye on the way in which brood hatches out. (5) You cannot safely decide this question till worker-brood is seen to be hatching out all right.

Bee Shows to Come.

A nominal charge of 2s. 6d. is made for notices (not exceeding 7 lines) in this column, 10 lines charged 3s. 6d., up to 15 lines 5s., which covers cost of insertion from order till date of show. Cash should accompany orders for insertion.

July 18, at Ashby-de-la-Zouch, Leicestershire.—Show of Bees, Honey, and Appliances, in connection with Annual Flower Show. Three open and two local classes, and one L.B.K.A. Bee demonstrations. Schedules from J. H. Dunmore, Secretary, Alandale, Ashby-de-la-Zouch. **Entries Close July 16.**

July 19 and 20, at Gainsborough.—Show of Honey, Hives, and Bee Appliances in connection with the Lincs Agricultural Society. Bee Department under management of the Lincs B.K.A. Fourteen classes. Liberal money prizes and silver medals. Schedules from R. Godson, Hon. Sec., Lincs B.K.A., Tothill, Alford, Lincs. **Entries closed.**

July 25 and 26, at Cardiff.—Annual Show of the Glamorgan B.K.A. in connection with that of the Cardiff and County Horticultural Society. Honey, Wax, Appliances, etc. Classes for members, novices. Five open classes, with prizes for sections and Bee appliances, 30s., 15s. Entry fee for one or more of the open classes to non-members, 2s. 6d. Schedules from Wm. Richards, Hon. Secretary, The Red House, Gahalfa, Cardiff. **Entries close July 20.**

August 1, at Henbury, near Bristol.—Annual Show of Honey and Wax, of the Henbury District Beekeepers' Association, with bee lectures, by County Council's expert, in connection with the Horticultural Society's Exhibition. Open classes, good prizes (classes with free entry). Apply Hon. Sec., J. Atkin Waller, Fen Park, Westbury-on-Trym, Bristol. **Entries close July 25.**

August 1, at Bishop's Stortford.—Honey Show in connection with Bishop's Stortford Flower Show. Open classes. Schedules from W. J. Ritson, Stansted, Essex.

August 1, at Upwell, Wisbech.—Horticultural Society's Show. Open classes for Honey, including gift class for 1lb. jar. Schedules from Hon. Sec., J. Hy. Inman, Upwell, Wisbech. **Entries close July 28.**

August 2, at Wallop, Hants.—Honey Show in connection with Wallop Horticultural Society will be held in the grounds of Wallop House by kind permission of Mrs. Ross. Open classes. Apply Dr. Burt, The Grange, Nether Wallop. **Entries close July 25.**

August 6 (Bank Holiday) at Cambridge.—The Cambs and Isle of Ely Beekeepers' Association have arranged for a show of Honey, Wax, and Bee Appliances, at the Mammoth Show to be held in Cambridge on the above date. Liberal prizes are offered. Each class is open to all the world. The gift classes being presented to local charities. Schedules from the Hon. Sec., G. E. Rogers, Beeholm, Cambridge. **Entries close July 30.**

August 6 (Bank Holiday), at Melton Constable Park. — Annual Show of the North Norfolk B.K.A. Schedules from C. J. Cooke Edgefield, Melton Constable. **Entries close July 28.**

August 8 to 10, at Middlesbrough.—Show of Honey, etc., in connection with the Royal Yorkshire Agricultural Society. Schedules and form of entry from John Maughan, Secretary, Blake-street, York. **Entries closed.**

August 8, at Clevedon, Somerset, in connection with the Horticultural Show.—The Somerset B.K.A. will hold its first annual Honey Show as above. Several open classes. Schedules from Louis E. Snelgrove, Hon. Sec., Cromla, Locking Road, Weston-super-Mare. **Entries close July 21.**

August 9, at Abingdon Park, Northampton. — Honey Show of the Northants B.K.A. Special prizes, including the Baroness Burdett Coutts' prize hive for cottager members, also three open classes, including one for single 1-lb. jar honey. (**Entry free.**) Prizes, 20s., 10s., 7s. 6d., and 2s. 6d. Schedules from R. Hefford. Hon. Sec., Kingsthorpe, Northants. **Entries close August 3.**

August 9, at Madresfield, Malvern. — Annual Show of the Worcestershire Bee-keepers' Association. Open class. Schedules from Mr. Geo. Richings, 2, Shrubbery Terrace, Worcester.

August 15, at Wye.—Kent Honey Show. Sixteen classes for Honey and Bee Products. Greatly increased cash prizes; Classes 1 to 11 open to Kent; Classes 12 to 16 open to the United Kingdom. Open classes include—Single 1-lb. jar light extracted honey; single 1-lb. jar dark ditto, 20s., 10s., 5s., in each class; 1-lb. section, silver cup. Trophy class First prize silver cup, value £3 3s. Best collection of Bee Appliances, first and second prizes. Special arrangements for Bee Demonstrations and many other new attractions added this year. Schedules on receipt of stamp from J. Tippen, Secretary, Wye, Ashford Kent. **Entries close August 10.**

August 16, at Yetminster, Dorset. — Annual Show of the Yetminster and District B.K.A. held in a field kindly lent by Mr. Jolliffe. Four open classes, including three 1-lb. jars extracted honey, three 1-lb. sections, and cake of beeswax. Schedules from G. Leeding, Hon. Sec., Bradford Abbas, Sherborne. **Entries close August 10.**

August 17. — In Public School, Fort William. — Honey Show in connection with the Horticultural Society. Classes for sections and extracted honey, open to amateur and cottagers. Challenge class (open to all) for three 1-lb. jars extracted honey; prizes, 20s., 12s., 8s., and 4s.—Schedules from Secretary, Horticultural Society, Fort William, N.B.

August 24, at Exeter.—Annual Show of the Devon B.K.A., in conjunction with the Devon and Exeter Horticultural Society. The Baroness Burdett-Coutts' prize, hive for the best exhibit shown by cottager members. Dr. Philpott's prize of £1 1s., for the two best sections of comb honey. All open classes. Schedules from the Hon. Sec., A. S. Parrish, Heavitree Road, Exeter. **Entries close August 18.**

August 29, at Chester.—Cheshire B.K.A. Show in connection with the County Agricultural Society. Open classes for Hives, Observatory Hives, Sections, and Extracted Honey. Baroness Burdett Coutts' prize hive for best exhibit shown by cottager member. Seven classes for members. Schedules from T. A. Beckett, St. Werburgh Chambers, Chester. **Entries Close August 8,** or at double fees, **August 15.**

August 30, at Montgomery.—Honey Show in connection with Horticultural Exhibition. Two open classes for six 1-lb. sections and six 1-lb. jars extracted honey. Prizes, 10s., 5s., 2s. 6d. Entry fee, 1s. each class. Schedules from Mr. W. J. Jones, Secretary, Montgomery. **Entries close August 23.**

September 8, at Dumfries.—South of Scotland B.K.A. 14th Annual Show of Honey, Bees, and Appliances. Five open classes—viz., three 1-lb. jars, three 1-lb. sections, and for single jar and section (free entry), and cake of wax; also handsome money prizes and valuable medals, for members only. Schedules from Jas. Johnstone, Sec., Nelson Street, Maxwelltown. **Entries close September 1.**

September 13, at Castle Douglas.—Honey Section, Dairy Show. Liberal prizes. Five open classes—viz., three 1-lb. jars, three 1-lb. sections, single jar, single section, and for cake of beeswax. Schedule from Jas. Johnstone, or from L. Aird, Hardgate Schoolhouse, Dalbeattie. **Entries close September 1.**

September 8 to 15, at the Agricultural Hall, London.—Honey Show in connection with the Confectioners', Bakers', and Allied Traders Annual Exhibition and Market. (See large advertisement on page i.) **Open to all British Bee-keepers.** Entry fee in each class one shilling. Schedules from H. S. Rogers, Secretary, Exhibition Offices, Palmerston House, Old Broad Street, London, E.C.

September 20, 21, and 22, at Crystal Palace.—Surrey B.K.A. Annual Exhibition of Bees, Honey, Wax, and Appliances, etc. Twenty-six classes (ten open to all). Increased prizes and medals. Schedules from F. B. White, secretary, Marden House, Redhill, Surrey. **Entries close September 7.**

September 22 to 29, at the Agricultural Hall, London.—Honey Show in connection with the Twelfth Annual Exhibition and Market of the Grocery and Kindred Trades. Nearly £50 in prizes for honey and beeswax including four prizes of £4, £3, £2, and £1, in honey trophy class. **Open to all British Bee-keepers.** Schedules from H. S. Rogers, Secretary, Exhibition Offices, Palmerston House, Old Broad Street, London E.C.

September 26, at Altrincham.—Show of Honey Products, in connection with Altrincham Agricultural Show. Open to United Kingdom: Classes for Hives, Observatory Hive, 12 Jars Extracted Honey. Open to County of Chester only: Classes for Trophy, Amateur-built Hive, Two Shallow Bars, 12 Jars Run, 12 Sections, Wax, etc. Special classes for cottagers. Special classes for Society's district. Liberal prizes. Low entrance fees. Schedules from Mr. J. H. Hall, 2, Dunham Road, Altrincham. **Entries close September 9.**

October 9 to 12, at the Agricultural Hall, London.—Show of Honey and Bee Produce in connection with the British Dairy Farmers' Association. Numerous and liberal prizes for honey, etc., including the valuable Silver Challenge Cup of the B.B.K.A. Schedules from Mr. Wm. O. Young, Secretary, 12, Hanover Square, London, W. **Entries close September 12.**

*** We regret that the address of Mr. W. E. Brooking, of Malborough, Kingsbridge, Devon, who won first prize in Class 434 at Royal Show was omitted from our report last week.

Notices to Correspondents & Inquirers.

E. A. (Cambridge).—Liability of Bee-Keepers for Damage to Horses, etc.—1. Yes, a bee-keeper is liable for damage done to horses or cattle through bee-stings. 2. You will obtain particulars of an insurance scheme promoted by the B.B.K.A. for the above purpose by writing to the secretary, Mr. E. H. Young, 12, Hanover Square, London, S.W.

T. S. (Clay Cross).—A correspondent to whom we sent your specimen, writes:—"The sprig of willow is the *Salix triandra* (Black Hollander). It is very easy to cultivate, and is struck from cuttings. I have quantities of it growing on my land here, and the bees are so fond of it that they clear the whole of the pollen from the catkins."

J. W. J. (Willington, Durham).—A Beginner's Difficulties.—1. Bees, as a rule, cast out drones in summer when weather is adverse or food is running short. 2. A bee-smoker may be made more effective in subduing vicious bees, by adding a little tobacco to the smoker fuel.

L. ILLINGWORTH (Cambs.).—Cases for Four Bee-way Sections.—Sorry to say we cannot name a dealer who stocks these. Perhaps some reader may be able to help you by sending a line to this office.

T. C. P. (Kettering).—A Swarming Difficulty.—We think you may be certain that parent queen of the hive has been lost, and that accounts for the swarm returning; so that the colony is now headed by a young queen.

Suspected Combs.

H. W. W. (West Bridgford).—Comb sent is affected with the disease called (in America) "pickled brood." The methods of treatment followed by those who have had experience of this bee malady in America have already been recorded in our pages. You might, perhaps, be disposed to follow the treatment followed in "Guide Book" (page 152)—i.e., making an artificial swarm of the bees and giving full sheets of foundation in place of old combs in frames. This has been found effective.

AYRSHIRE NOVICE (Maybole, N.B.).—1. Comb is affected with foul brood, but evidently not a bad case, though two cells show the disease in pronounced form. We advise drastic measures, as the stock is weak and bees not worth risking your other five healthy colonies to save them. 2. The honey from diseased stock is quite suitable for house use, being inocuous to human beings. Thanks for your appreciation of B.B.J.

T. S. (Hayle).—There is no foul brood in comb sent.

W. G. (Yorkshire).—Sorry to say comb is diseased, foul brood being plainly discernible.

G. A. W. (Manchester).—Sample was not suitable for diagnosing, but we fear there is foul brood in it.

W. H. S. (Birmingham).—Comb sent shows foul brood in very pronounced form.

ANXIOUS (Abergavenny).—The comb sent shows all the symptoms of "pickled brood," as described in articles from American bee journals, which have appeared in our own columns.

C. W. (Market Harborough).—"Pickled Brood."—There is no sign of *Bacillus Alvei* in comb sent; nor is the appearance of dead larvæ in cells similar to that mentioned by Mr. W. J. Farmer on page 233,

and known in America as "pickled brood." In the latter case the dead brood is found in large patches, and when the cell-capping is removed the dead larvæ is seen to be watery and soft in appearance as if "pickled"—hence the name. In your sample the immature dead bees were dry, and firm, with numbers of young bees hatching out. Nearly a dozen walked out of cells while sample was being examined. We think the fact of the stock referred to having sent out two swarms has caused the trouble, and it will come round before the season closes.

**** *Some Letters, Queries and Replies, &c., are unavoidably held over till next week.*

Special Prepaid Advertisements.

Twelve words and under Sixpence: for every additional Three words or under, One Penny.

ENGLISH HONEY PURCHASED in any quantity for prompt cash. Send sample, stating quantity, and we will send prompt offer for all you have. —SPRING AND CO., LTD., Brigg, Lincs. R 17

BARGAIN.—SHALLOW COMBS for SUPERING; clean, straight, healthy; 5s. and 6s. dozen.—WALKER, Confectioner, Farncroft. R 10

WANTED.—GOOD HONEY EXTRACTOR and RIPENER.—FERRIDAY, Lichfield Road, Four Oaks, Birmingham. R 16

QUEENS, specially selected from honey-gathering stocks; fertile maidens, in introducing cage, 2s. 6d.—CHARTER, Tattingstone, Ipswich. R 13

LIGHT EXTRACTED HONEY, 52s. 6d. cwt.; in screw-cap jars, 8s. dozen; sample, 2d.—CHARTER, Tattingstone, Ipswich. R 14

SECTIONS and EXTRACTED HONEY, in bulk; first quality; sample, 3d.—PULLEN, Ramsbury, Hungerford. R 12

DRIVEN BEES, with Queens, commencing August; 3s. 6d. per lot, cash with order; boxes returned; orders in rotation.—T. PULLEN, Ramsbury, Hungerford. R 11

TWO new, two old HIVES, on ten Standard Frames, 32s. and 25s. each; Well's Hive, with rack of 2lb. sections, £1.—ENGLISH, 16, Lister Street, Scotswood. R 9

HEALTHY DRIVEN BEES, commencing August; delivery to August 20, 4s. per lot; after this date, 5s. 6d.; orders cash; delivered rotation; boxes returnable.—H. C. SMITH, The Apiary, Woodmancote, near Cirencester. R 10

MY SECTION RACKS are well known in East Sussex as the best and cheapest; all Bee-keepers should try one; 2s. post free; or with 21 sections, starters and dividers, 4s. post free; my 10s. 6d. Bar-Frame Hives are a real bargain.—RANSAM, White Clover Apiary, Hellingly, Sussex. R 8

GOOD SECTIONS WANTED.—R. CARTER, Chartridge Green Farm, Chesham, Bucks. R 7

WANTED, SECTIONS; any quantity taken.—COOK, 56, Hop Exchange, Borough, London, S.E. R 6

WANTED, CYLINDER EXTRACTOR, second hand, perfect.—J. WRIGHT, Melbury, Bushey Heath, Herts. R 5

FOR SALE.—STRONG NATURAL SWARMS, securely packed, 12s. 6d.—LINSTEAD, North Lopham, Thetford. R 3

TWO TONS FINEST LIGHT EXTRACTED HONEY for sale, in lots, to suit purchasers. Write for prices, stating quantity required. Samples, 3d.—CHARLES H. BOCOCK, Ashley Apiaries, Newmarket. R 4

QUEEN-REARING.—MEADOW'S APPARATUS (12 cups) for sale; excellent order; extra cages; useful for introducing; 6s.—"B.," care of this Journal. R 2

WANTED, TWO FRAME OBSERVATORY HIVE; good maker; approval.—CREBER, Whitchurch, Tavistock. R 1

WILL CUSTOMERS kindly return all empty Honey Tins belonging to A. COE, Apiary Hall, Ridgewell, Halstead, Essex.

1,800 lbs. SPLENDID NEW WHITE CLOVER HONEY, £3 per cwt.; sample, 2d.; in 28lb. tins, same rate.—ALBERT COE, Apiary Hall, Ridgewell, Halstead, Essex. R 18

STOCKS IN SKEPS, 1906. Fertile Queen, 12s. 6d.; ditto on three standard frames wired, 11s. 6d.; ditto with Sladens direct Golden Prolific 1906 Queens, 15s. 6d.—W. WOODS, Normandy, Guildford. Q 97

READY for Delivery, healthy FERTILE QUEENS (1906), 3s. 6d., in introducing cages, post free.—CARBINES, Bee Expert, Cardinham, near Bodmin, Cornwall. Q 95

STING PROOF GLOVES, 2s.; with sleeves, 2s. 6d., post free. Why pay more?—KENT, Manufacturer, Dorchester Q 93

QUEEN FOR SALE, now laying, 4s.—H. E. HALL, 14, Park Street, London, N. Q 91

TILLEY'S PATENT ("Won't Leak") SECTIONS, sample 6d., post paid. Complete Super, 3s. 6d., on rail.—J. T. GODWIN, Agent, Dorchester. Q 90

HONEY EXTRACTOR, 19s. 6d., cost 25s.; large Wax Extractor, 8s. 6d., worth 12s. 6d.; both new; genuine bargain; free on rail.—HEWETT, Ironmonger, Alton, Hants. Q 86

HALF TON splendid Light English New WHITE CLOVER HONEY, £3 per cwt. Sample 3d.—ALBERT COE, Apiary Hall, Ridgewell, Halstead, Essex. Q 76

IN one of the prettiest villages in East Devon, on a Bee farm; FURNISHED APARTMENTS.—SOUTHCOTT, Gittisham Apiary, Honiton. Q 73

FOR SALE, 20 stocked Carniolan HYBRIDS, each on eight frames, Abbott's pattern, six of brood; all combs wired and worked from full sheets.—T. W. SHAW, Eden House, Sedgefield, Co. Durham. Q 74

HOLIDAYS.—Cornwall; delightful situation near sea and Land's End; 30s. — S. HARBORNE, Apiary, St. Bunyan, R.S.O. Q 69

NEW SECTIONS FOR SALE. NEW SECTIONS.—J. P. FISON, Holningsea Apiary, Cambridge. Q 67

PURE EXTRACTED HAMPSHIRE 1906 HONEY FOR SALE, 28lb. tins, 56s. per cwt. Sample 3d. Cash or deposit.—A. GREEN, Tangley, Andover. Q 66

QUEENS (celebrated Doolittle strain of Improved Italians).—A customer writes: "The virgin I had from you last year has done splendidly. Stock now on 33 Standard Frames." Virgins, 1s. 6d.; Fertiles, 5s. Safe delivery guaranteed. First come, first served.—DAVID TAYLOR, 1, Ilminster. Q 64

WANTED, SECTIONS, first quality; prompt cash; also extracted per cwts.—W. CHILTON, Brookside, Polegate, Sussex.

NEW SECTIONS, HONEYCOMB.—Supplies wanted, at once.—SMITH, Cambridge Street, Hyde Park. Q 29

Editorial, Notices, &c.

THE LATEST BEE SCARE.

Among the various bee scares which have had a "turn" in the columns of the daily Press, none within our knowledge has been taken more seriously by leading papers than the most recent one regarding the disease known to bee-keepers for over twenty years as bee-paralysis. This is stated to be "a new and highly infectious disease," which we find, a so generally solid leading journal as the *Standard* giving prominence to in type as large as one expects to see when notifying something of national importance.

Not only so, but the B.B.J. office has been honoured by a call from representatives of several leading papers (including the *Standard*) enquiring if we could give them reliable information on the subject. Unfortunately, as it happened, we have been away from the office for several days past, busily occupied in the prosaic, but none the less useful, work of examining candidates for the B.B.K.A. experts' certificates, and consequently failed to see any of the Press-men who were good enough to make enquiries. We hope, however, to refer to the subject more fully next week by way of relieving the minds of bee-keeping readers from any alarm that may be felt. Meantime, we hope Mr. Cooper, local hon. sec. of the Hants and Isle of Wight B.K.A., will forgive us for saying that he will have something to answer for if correctly reported as having "estimated that quite half the bees kept in the Isle of Wight are now dead"! Also that the disease "had not yet appeared on the mainland," or that "if it got a footing there it would probably mean the ruin of the bee-industry so far as England is concerned."

Correspondence.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

NOTES BY THE WAY.

[6365.] We have passed St. Swithin's Day, and our bees in the South are now in the last period of surplus-honey gathering from the last sources of the year—*i.e.*, the limes, along with what little is left of white clover, the modern farmer's "aftermath." In this district we get very little super storing after the lime trees have done flowering. There is a good show of blossom on the trees, but the weather is dull and cool, with westerly breezes. It makes one long for a week's sunshine with the thermometer at 80 deg. in the shade. This would start the hives booming again.

What of the Harvest?—In this part we have had a poor season in every respect for the bee-keeper. A cold, cheerless spring, in which it was impossible to get stocks up to the "boiling-over" point, even with the greatest care and attention, along with constant feeding. Then we had a few days of warm weather, followed by a chilly, dull, and unsettled week. Then came a few days of sunshine and warmth, which started swarming, followed by a cool, sunless, rainy week, in which the bees scarcely gathered enough for their daily wants. Indeed, stocks began killing off the drones in my apiary, and thus completely shattered our hopes of any further swarms in 1906. After a sunny day or two the limes—our last hope—came into bloom, and from present appearances this hope seems destined to be spoilt (as the early crop was) by want of warmth and sunshine. It appears that in widely-divided parts of England similar conditions prevail, but this shortage of crop will not, I suppose, influence prices. I notice one advertiser in your paper offering new English honey cheap (evidently to catch the market) before he had honey to supply customers with. I was, therefore, glad to see others called attention in your columns to the injury done to the craft by these rush-at-any-price bee-keepers, who perhaps have a good income from other sources, simply keeping a few hives as a "hobby," or, may be, for the good of the missionary cause.

Bees Nibbling Away Foundation.—Towards the end of the honey-harvest bees will (and do every year) nibble away the foundation given them in the sections, using the wax—as they do propolis—to fill up all crevices in the supers. This I have proved, year after year, but I do not think they use it for capping the honey, as some suppose. The only plan of testing this would be to use coloured wax for the nibbled sections, then the colour would show if used on the face of the capped honey.

Wiring Frames.—When using full sheets of foundation I usually make two holes in top-bar near the ends, and similar holes in side-pieces near the bottom-bar; then stretch the wire diagonally and twist the wires where they cross each other near the centre. By this means I have had good results in every comb built of "weed" foundation. I notice a correspondent, "A. H., Wavendon" (6338, page 244), "cannot understand why bee-keepers prefer *prime* swarms." As I have sent out many of these in the past twenty years, I may tell him the secret, and it is this: A prime swarm will fill in a good season a hive and

from forty to seventy sections. A young queen can be given if desired, or required, which in most cases is not required, because the 1906 swarm is headed by a year-old queen. But there are many chances that the queen may get injured in a long journey, or by the inquisitiveness of their owners, who in handling queens may not be sufficiently careful. Therefore, unless a record is kept in each hive the age of the queen may not be correctly given when sending off a swarm; but, judging the matter on broad lines, the fact of a hive sending out a 4 lb. or 5 lb. swarm early in the month of June is fair practical proof that a very prolific queen accompanies the swarm.—W. WOODLEY, Beedon, Newbury.

A PROBLEM IN SWARMS.

[6366.] About a fortnight ago, on going to my apiary, I found that one of my unoccupied hives had been taken possession of by some hybrid Ligurian bees. I was delighted, having long wanted some bees of this breed to improve my own. On going further through my hives I was still more astonished to find two other hives with the same kind of bee busily passing in and out of the entrance. I carefully examined each colony, and found in the first about a pint of bees, and in the others rather less. None had a queen, and many of the bees flew from the frames as I lifted them out, as they will do under such circumstances. When I went down again at night there was not a single bee left in any of the three hives. But the next day the little golden-banded strangers had taken possession of the same three hives, and were busily working on the old pollen in the combs, and possibly manipulating fragments of wax. But at night they again all disappeared. I was greatly puzzled as to the meaning of these tactics, which continued nearly a fortnight. Do you think it probable that a large swarm had passed over my apiary, and that the rearguard, accidentally or otherwise, straggled into these three hives, which are in three different parts of my apiary of about twenty-five hives? Why should they come exploring the hives each day and evacuate them each night? I thought it possible that the main body of the swarm had settled in some barn or bush not very far off, and located in very bare quarters, so far as regards bee-forage, or may be the bees paid their daily visit to my three hives to secure the pollen they could not obtain elsewhere.

I know that while I am telling you this you are giving me very black marks for allowing empty hives with a few elderly frames to stand in my apiary to possibly decoy neighbours' swarms; but there is only one other hive in our parish, and that is a mile away, the next being nearly two miles off. So I think if bees swarmed as far as that, if they did not alight there (which they have never done before), they would go to the hollow of some tree, or where they would be hopelessly lost to their owner. But, as there are no other bee-keepers near me whom I can harm I do confess to hoping some of my own errant swarms may be saved, as ours is such an exposed position, with no trees or cover near.

Now comes the strangest part. Two days ago, when I paid a visit to my bees, imagine my delight when I found that a complete colony had taken possession of the first hive, and were working indefatigably. I soon found the queen, and fed the bees, besides giving them more frames; they cover seven or eight. The other two hives contained a few stragglers, as usual. Now, imagine my astonishment when this morning I found that the second of these hives was also tenanted by a complete colony, with a fine queen, and working so busily that already, in twenty-four hours, the cells were half full of honey! And so I ask: What is the clue to these manœuvres? I feel inclined to dismiss the theory that the original swarm, accompanied by a few of these pioneers, quitted their temporary abode for more comfortable quarters. Are they two casts from the parent hive? Or was the prime swarm accompanied by two or more young queens that have now headed these colonies? Where did the bees (before these queens arrived with their armies) return to each night? And why did they come back so regularly each day? Was it only for pollen or propolis, or did instinct tell them the casts would soon come off, and were they making ready the home in advance? Or was it merely an accidental circumstance that on the issue of the swarm or cast these "visitor" bees, being with them, would naturally return to their haunts, and thus the others would follow or accompany them in an aimless kind of way? But is it not remarkable that the second swarm (if it was a second) should act exactly in the same way with a day's interval?

May I hope for a third family in the third hive? Have you ever known of bees preparing a future home like this before? It certainly has never come within my bee-experience of more than ten years.—QUEEN BEE, Bridport, July 9.

[The bees (Hybrid Ligurians) were pioneers, and, finding a comfortable home, took possession.—EDS.]

THE SEASON IN NORTH NOTTS.

[6367.] We have had splendid bee-weather here. With the exception of a very light fall of rain there has been no break for three or four weeks and no cold

winds, so that the bees have held high revels.

I do not remember having ever before seen such a wealth of white clover bloom as there is now in this district, but unless rain comes speedily and in quantity I fear its time is nearly over. With rain we might still have it yielding well for another fortnight or three weeks. One or two indications show that the flow of nectar is diminishing, not the least significant being the disposition of workers to attack the drones. This tendency is very evident to-day (July 14).

I had four stocks in prime condition to open the season with, and one of which threw a large swarm on May 29. The others have been prevented from swarming simply by giving plenty of room. A strong second swarm—or "cast"—followed after the usual interval, but the bees returned to the parent hive after being hived, and this happened three times. Twice they clustered, but once they returned without. From what I hear about the doings of stocks in skeps swarming has been a perfect nuisance in this neighbourhood.

My best hive is now four stories high—*i.e*, brood-chamber, set of standard frames, and two sets of shallow-frames—and packed with bees from top to bottom, and this from a single stock driven from a big sugar-box on August 19 last year. Two others were built up from driven bees.

My experiences this year have decided me on two points. First, I shall never again work sections and extracting frames on the same hive. Second, I do not intend for the future to make any type of hive except those with loose body-boxes. This is not because of anything connected with yield, etc., but simply because of ease in handling and cleaning.

I have already removed two racks of nicely-finished sections, and have commenced extracting. The honey is of fine quality, practically pure clover, and the lightest in colour I have ever harvested. One word with regard to section-racks. I have two kinds in use—one fitted with tin girders, and the other with simple strips of wood. I prefer the latter very much, for the sections come out much cleaner owing to the closer fit. Trusting that the honey-yield all round will be as good as mine promises to be, I sign—NORTH NOTTS.

BEES IN COURT.

OWNERSHIP OF SWARMS.

[6368.] I herewith enclose you cutting from the "Bristol Western Daily Press" of a case which is very interesting to bee-keepers, and I thought it would be useful to readers of the BEE JOURNAL, with your comments thereon. I have always been under the impression that if the swarm were followed a claim could be made, and that this was enough to establish it. This case seems otherwise.—W. L. PRETTY, Bristol, July 16.

F. M. Beamish, Pucklechurch, sued Thomas Nicholas for a swarm of bees or their value, 20s. Mr. Batson, solicitor, defended. Plaintiff said he kept over twenty stocks of bees, thirteen of which were the Italian variety which he imported direct. These were distinguished by the yellow bands on their bodies, and there were none but his in the district. He found the bees had swarmed, and two days after found that defendant had hived them in his garden. He offered him 5s. for his trouble if he gave them up, but he refused. Specimens of English and Italian bees were shown to his Honour. Mr. Batson was proceeding to cross-examine as to identity, when his Honour said the law was, you can follow the swarm and not be liable for trespass; but if anyone else follows and hives them they become his property. Bees must always remain wild, and there is no difference between English and Italian bees. He quoted Blackstone as to the law. The property in the bees became that of defendant directly he hived them. To defendant: Now, Mr. Nicholas, will you let him have these bees if he pays you 15s.? I cannot make you give them up, but you ought to.—Defendant: I am not sure they are his bees.—His Honour: Very well, I shall not give you costs. Judgment for defendant without costs.—"Western Daily Press," July 16.

BEE NOTES FROM DERBYSHIRE.

[6369.] The weather this spring was so changeable that bees were lost in large numbers when foraging. Some days, being exceptionally warm, enticed the bees out, and then a spell of cold east winds came, and many bees were lost. Stocks were, however, in much better condition at the end of April this year than last. By the third week in May my bees covered ten to twelve frames, and plenty of brood on both sides, but feeding was still necessary owing to the low temperature. But the weather again improved, so I supered several hives on May 28. A good swarm issued from one of my hives on June 3, which was returned, after making a nucleus and removing the surplus queen-cells. Several of my other hives have since swarmed, queens proving very prolific this season. During June we had good bee-weather, on the whole, and some nice honey was stored. July has also been a good month so far. Several good showers of rain helped the clover, and caused the "aftermath" to

make rapid growth. I took several racks of completed sections and shallow-frame supers off on July 9, and the extracted honey was distinctly flavoured with hawthorn. What has been stored lately, however, is chiefly from clover, and is of good quality. To all appearance this season will be a good one in this county, and I hope it will be for all bee-keepers, especially those who to some extent depend on the bees for their livelihood. Anyway, we have to be thankful that there is no honey-dew here this year, as our crop was completely spoilt with it in 1904.

I take a great interest in bee-keeping, and am pleased to see it is extending rapidly. No doubt this is largely due to its being so often noticed in the Press. Ever since I began to take the JOURNAL and *Record* four years ago I have read both papers with great interest, and hope our Editors will be spared for some time yet to continue their good work. I particularly enjoy the "notes" from our Scotch friends, "D. M. M." and W. McNally, as I do those of Mr. Woodley—they are all so practical.

I hope brother bee-keepers in other parts of the country will let us know how they have progressed this season, so that we can each compare "notes."—W. H., Derby, July 6.

INSURANCE FOR BEE KEEPERS.

[6370.] Referring to the invitation from the Council of the B.B.K.A. set forth in report of their meeting and appearing on page 251 of BEE JOURNAL, I am instructed by the committee of the Notts B.K.A. to say that they consider the Insurance year as now fixed, to be most inconvenient, seeing that it breaks into two seasons. Our committee therefore suggests that it should run from Lady Day to Lady Day. The reasons for this are:—1st, at that period the season is just opening: 2nd. Annual Meetings are being held, and at such times members would be more likely to take it up or remember to renew existing policies. —GEO. HAYES, Secretary, July 12.

CAPPINGS OF COMB.

By "L. S. C."

Bees Gnawing Foundation (*p.* 263).—This does not happen so readily during a honey-flow, natural or artificial; but it is a mistake to leave much foundation on the hives at other times. A little, partly drawn out, will act as a "W.B.P." for the surplus wax-scales which might otherwise reach the floor-board, not to be collected again by the most economical housewife.

Queen-rearing (*p.* 263). There seems to be a growing opinion that sections are too small for mating combs, in this country at least. My own frames are half-standard, and are quite small enough for me. I cannot think that Mr. Farmer really intended that queens should be "raised" in such nuclei, but only mated. Queens raised by "very few bees" would be the veriest scrubs!

Fixing Foundation (*p.* 263).—Dr. Miller uses small strips of wood soaked in hot wax and immediately laid upon the foundation. These become permanently attached, and eventually built over. In emergency, for part sheets to be joined, such strips might be used in pairs, one either side the sheet, clip fashion.

Worker in Queen-cell (*p.* 264).—I have just had a queen-cell brought to me containing a virgin queen alive and well, but reversed, and unable to back out of the cell, which was partially closed, whether by accident or design was impossible of determination. Other virgin queens were at liberty in the hive, and she had evidently entered either for refuge or, less likely, for the food which the cell still contained. The cell showed decided thickening at the orifice.

Raynor Crate (*p.* 264).—It is amusing to notice that this critical writer uses the words "crate" and "rack" indiscriminately in the same par! The explanation must be that "Raynor crate" has always been the specific term for this rack. Messrs. Abbott Bros. call this the "Benthall." Which is right?

Caught Napping (*p.* 272).—As potential teachers, our own mistakes would seem to be easily first, and, after them, the mistakes of others. In a beginner, at least, confession of mistake is a sign of progress, and our thanks are due to old hands like our good friend "D. M. M." for such open confession as this. It is doubtful if there is any infallible hive system which will permit of unvarying adherence year after year, and even systems tried and proved may fail in exceptional years where a locality does better or worse than its habit. It is better, however, to have the system than to be continually experimenting with a whole apiary.

Nucleus or Nuclei.—The latter word bids fair to become a singular noun! I have recently had candidates who spoke of "a nuclei," and even "D. M. M." (p. 272) says "strong nuclei lots," whichwould appear to be a double plural, and "A. H." (p. 276) says "this nuclei." Nucleus, gentlemen, please! But these are probably compositors' errors. I, too, have suffered from the same stick! If so, it is hereby urged upon them that the culprits become bee-keepers in order to learn the technicology of the craft!

Magic of Change (*p.* 272).—Is a failing queen a cause of swarming? Would it not be more likely to cause supersedure? Is not the *apparent* failure often due to pollen

clog? Is not also the revival of power after swarming due to more efficient *stoking?*

Two Queens in One Hive (*p.* 272).—If two swarms become accidentally united, and against the wish of their owner, they may be separated by hiving them at once in a large receptacle, such as a Wells hive with the division removed. If a comb be placed at each end the probabilities are that the next morning will find the swarms clustered separately upon them.

The Alexander Plan (*p.* 273).—If there is an excluder between the tiered hives, how can the queen lay in "nineteen frames"? Perhaps this should read nine, the tenth comb being already occupied by brood.

Queen Not Taking Wing (*p.* 274).—This queen, or another, took wing all right the following day, or when she was a day older. Much water may run under the bridge in a day, and, in the case of a hive prepared to throw a cast, much may happen in twenty-four hours!

Queries and Replies.

[3356.] *Queen Not Laying.*—I should be greatly obliged if you would kindly give me information upon the following point through the B.B.J. On June 22 I had a strong swarm which was successively hived—according to "Guide Book" instructions—on six frames. Upon examination to-day I find five frames of comb fully drawn-out, and have, accordingly, inserted another frame of foundation; but there is no sign of larvæ or brood of any sort. The bees are gathering honey well, and also pollen, having some of the former sealed over on two frames. Should not the queen have been fertilised before this? The weather here has been rather bad lately, but we have had a few fine days since the swarm was hived. I shall be glad to hear whether you think all is well, or whether I had better get another queen and insert her in the hive.—J. H. W., Morton, Bingley, July 4.

Reply.—The queen of "a strong swarm" should have been fertilised and laying when received, and if this was the case it is difficult to understand there being "no sign of larvæ or brood of any sort" in the combs when the swarm has been hived for nearly a fortnight. We should expect to see eggs in four or five days, at most, after hiving. Your best course it is examine the combs of brood-nest without delay, and if no eggs or young larvæ are seen the queen must be found, if there. On the other hand, if an unmated queen was sent with the swarm, she may possibly be still unmated. If the hive is queenless, not a day should be lost in procuring and introducing a fertile queen.

[3357.] *Making Artificial Swarms.*—Wishing to increase my stocks I made an artificial swarm yesterday, and though I did not keep quite to the method described on page 94 of "Guide Book," I think they will do very well. Instead of taking out the frame of bees on which the queen was found, I left it in the hive and removed all the other frames (with the bees on them) and put them in a new hive a little distance off. I then filled the old hive with frames of foundation which were partly pulled out this morning. (1) Do you consider the artificial swarm will do all right this way? (2) I should like to take in a French bee paper, but do not know where to get one. Would you kindly let me know where I might get "l'Apiculteur," and how much it is? Thanking you in anticipation for replies. I send name for reference, and sign —"Abeille," Cheltenham, July 4.

Reply.—(1) We cannot understand why you should depart from the instructions given in the "Guide Book," and ask if we approve of your method. The directions given in the book named are the outcome of long practical experience, and if adhered to will make for success. On the other hand (and we say it in all kindness) your plan simply courts failure by ignoring the principle on which the making of an artificial swarm successfully is founded. In other words, the "swarm," if placed on the old stand, will be all right, but the brood left in the parent hive will, unless the high temperature now prevailing continues, probably be chilled to death for want of bees to keep it warm. (2) The French journal, "l'Apiculteur," may be had from 28, Rue Serpente, Paris, at 6 francs per annum, post free.

[3358.] *More Swarming Troubles.*—On May 12 I successfully hived a fairly large swarm, which by the third week in June covered ten frames, but the bees did not start work in the super, put on early in that month, till the 29th, when I found they had taken possession. Three days later, however (July 2), two swarms issued, one large, the other small. The latter made off and was lost, while the larger one was not found until after I had examined the hive, and cut out half-a-dozen queen cells. I attempted to hive the large swarm as soon as it was discovered, but being in a very difficult position for hiving I was unsuccessful, as the bees on being disturbed returned to the parent hive. I then put two new frames of foundation in the latter and placed an excluder over the hive-entrance for twenty-four hours. Will you kindly tell me —(1) Why two swarms should issue at the same time? (2) If it was right to cut out queen cells so soon after they had swarmed? (3) If it was right to put a queen excluder at the entrance? (4) Is it probable there is a young queen in the hive? (5) The name of the Secretary of the Notts. B.K.A.? The hive seems to be doing well, and the bees are in the super and covering all the twelve brood frames. I send name, etc., and sign —"Notts."

Reply.—(1) It was not two, but one swarm divided into two clusters. The smaller lot evidently had the queen with them, and being lost, the large cluster hung till found, when, on being disturbed and queenless, the bees returned to the parent hive. (2) As it turned out, your action in cutting out queen cells will have cost the bees a fortnight or three weeks in raising a new queen to replace the lost one. (3) No, it is always bad (sometimes disas-

trous) policy to attempt to stop swarming by preventing the free exit of bees from a hive at swarming time. (4) The bees will probably be raising one. (5) Mr. Geo. Hayes, Mona Street, Beeston, is Sec. of Notts. B.K.A.

[3359.] *A Swarming Incident.*—A word of reply on the following matter through your valuable paper, of which I am a regular reader, will much oblige. I have had an argument with a bee friend on the following question, and in order to decide this matter, I will be glad if you will say, can a swarm of bees be driven from a skep into a frame-hive without queen first going in?

I had a swarm on Sunday last. I first hived the bees into a skep, then at night when it was dusk I drove them into a frame-hive, and the bees all went into the latter quite nicely, leaving queen alone in the skep. I captured her in a glass and let her run into the hive along with the last of the bees. This is what led to our argument, for my friend could not believe that I had done as stated above, and stoutly maintains the opinion that the bees would not enter the hive until the queen had gone in. I send name and sign—"QUEEN," Derby.

REPLY.—We cannot quite see what is meant by "a swarm of bees being driven from a skep into a frame-hive." If the swarm is got into a hiving-skep the bees are thrown out in a heap from the latter on to a board, or a cloth, and allowed to run into the frame-hive, prepared beforehand to receive them. Sometimes the queen runs in very soon, and at other times she may be among the last to go. Is this what you desire to know?

[3360.] *Mishap to Queen Bee.*—I shall be much obliged if you will give me your opinion as to whether the enclosed queen has been killed by the bees or by a rival queen? I ought to explain that I had been examining the hive in order to find out if it had swarmed, as a swarm had issued unseen, and I could not tell where it came from. I found the dead queen on the floorboard surrounded by a few bees. I cut out all queen cells and returned the swarm. I put one of the queen cells into a queen-cell cage and placed it into the hive from which the queen came out. I therefore ask—(1) Is this correct, and if so (2) what shall I do next?—A. S. B., Pudsey, Yorks., July 4.

REPLY.—(1) Bee sent is a fine, full-sized adult queen, as nearly black as a native can be. There are no signs of "balling," and from other indications we think it is certain that the mishap has occurred when you were examining the frames, as mentioned above. (2) Unless you purchase a fertile queen to give the stock, it will be the simplest course to allow the bees to raise one for themselves, which they will do as the hive had not swarmed.

[3361.] *Dealing with Swarms and "Casts."*—May I trouble you for advice on the following:—I had a swarm from a skep on May 30, which is now housed in a frame-hive and in first-class order. I put the bees on eight full sheets of foundation, of which five frames were found full of brood on both sides a fortnight after they have hived. From the parent hive I had a second swarm or cast on June 17 (Sunday). The last-named was nearly as large as the first swarm. This lot also was put into a frame-hive, and is doing very good work in honey-gathering, but not getting on fast with the brood-nest. I fancy that the reason for this slow progress must be owing to the queen being probably an old one. She has laid a nice lot of eggs, but only in small patches, say about four or six cells with an egg in each; then she seems to move away to another place. A friend having given me a fine, ripe queen cell, I made a special examination of the above-named "cast" in order to see if there was any improvement, but found none; indeed, only two combs contained any brood at all. I therefore removed the queen and inserted the queen-cell mentioned above. There were plenty of drones in the hive. I send the queen alive for you to examine, and will be much obliged if you will answer the following queries in B.B.J.:—(1) What is the age of queen sent? (2) Have I done right in taking her from the stock and inserting the ripe queen-cell? (3) How long will the new queen be before she begins to lay? (4) Do you think she will be safely mated? I take the B.B.J. every week and am sure it must be a very great help to all amateurs like myself. I send name for reference, and sign—A. K. F., Lincs., July 2.

REPLY.—(1) Queen sent (dead on arrival) was only a few weeks old, and has all the appearance of a virgin. (2) You should have allowed a few days to elapse after removal of queen before inserting the "ripe cell" mentioned, in order that the bees might have time to realise the loss of their queen, and have made preparation for raising a successor before giving the cell in question. They may have allowed the young queen to hatch out, and they may have torn the cell down and destroyed the inmate. The first chance should therefore be taken to examine combs and see if young queen is safe. (3) Operations, such as are mentioned above, to be successful, need some guidance and experience, and, in consequence, a guide book of some kind is indispensable—if success is to be attained—wherein all but the most simple operations are fully described. (4) If the queen has hatched safely, there is every chance of successful mating at this season.

[3362.] *Queen Lost from Nucleus Hive.*—I examined a nucleus hive, on July 9, which I formed a week before, and found that the queen had duly hatched and torn away the side of the remaining queen-cell, but I could not find the queen, so I put frames back, and examined fronts of the other hives and found the enclosed queen, which I take to be a young one, in front of the parent hive, which stands four hives away. She was quite dead when I picked her up, but not stiff and brittle like bees that have been dead and exposed for some time to the atmosphere. What I desire to know is, 1, Is she a young queen? 2. Has she been mated? 3. Is it possible she flew away on my examination of the combs, and on entering another hive was killed by the defenders?

A reply in the "B.B.J." will greatly oblige. I send my name, etc., and sign myself. "Slow Coach," Kendal.

REPLY.—1. No, the queen is an adult. 2. She is fertilised, and, no doubt, a laying queen. 3. The young queen may have been lost on her mating trip, or may possibly be still in the hive, but the dead queen found in front of the colony from which the nucleus was formed may be from another stock, and been killed and cast out of the parent hive of the nucleus in question. You had better examine the latter again, and let us know result.

[3363.] *Utilising Driven Bees.*—An old skeppist with whom I have lately come into contact has promised me some three or four skeps of bees in the autumn if I will drive them instead of him using the "sulphur pit." Could you please tell me how soon it should be done in order to make a strong stock of the bees? I have a hive, but would they, at so late a date, draw out the foundation or build their brood nest? 2. Shall I have to feed them through the winter? I cannot find in the "Guide Book" any details with regard to "Driven Bees." The honey season is backward about here, no surplus having been removed yet, so far as I know. I possess two stocks, one of which is doing well, and such hard and late workers. Many thanks for the valuable information contained in the "B.B.J." and *Record*, which I constantly read. Name sent for references. — "Perplexed," Berks, July 9.

REPLY.—If the bees can be had at end of August there will be ample time to build them into good stocks for wintering before cold weather sets in. It will only be necessary to feed the bees liberally with a rapid-feeder until they have the combs built out, and 20lb. of sealed food in store by the end of September.

[3364.] *Bees Not Working in Sections.*—In April last I purchased two stocks of bees, one of which swarmed in May, the other on June 4. Since then I have had three casts or second swarms from the parent hives. Two of these I united, and the third one I joined to the top swarm of June 4, thus successfully making two very strong stocks, both of which are working vigorously, each having already built out seven frames of comb. The foundation used is Root's weed (drone cell), and should work out all right. I am a novice in bee-keeping, and have strictly adhered to the valuable instructions given in the "B.B.J." and "Guide-Book." I find all the parent hives are very strong, with an abundance of stores and brood in combs. Both have sections on, with queen-excluders between frames and the section-racks. Two of the sections have comb in, but as yet the bees are not working in them. The foundation used was purchased locally, and apparently made in the U.S.A. (I enclose sample for inspection.) The May swarm is working well in sections fitted with the same foundations, and I will be obliged if you will tell me if any further steps can be taken to induce bees to work the sections? I enclose name for reference.—F. B., Thanet.

REPLY.—The refusal of bees to work in sections may be safely attributed to the depletion of the hive after sending out two swarms. This being so, we cannot give you any hope of surplus being got from the parent hives this year. With regard to the comb foundation given, you might read what Mr. Woodley says in his "Notes" (page 281), in which he expresses his opinion on bees refusing to work on foundation and nibbling it away for use in the hives.

[3365.] *An Amateur's Queries.*—Being an amateur bee-keeper, I crave a little information through the columns of your useful little paper:—I began in April, 1905, with a skep I got from a friend, having never previously seen a swarm or even ventured near to a hive. From this stock I got two swarms, and housed both successfully in frame-hives, made by myself, but by no means perfect. Indeed the only dimensions I was sure of, being the height and width. Since then, I have, with the help of the bee-keepers' "Notebook," made three hives of proper size, etc. This year on May 30, the original stock in the skep threw out a strong swarm which are now hived on nine frames. On June 10, a small second swarm—or cast—issued from the parent skep. These were also hived, but the bees hardly cover two frames. This stock I call No. 4. The stock made from last year's swarm (No. 2) sent out a prime swarm on June 11, and the bees are now hived on six frames. This is No. 5. Then on June 22 a second swarm came off and clustered on a Scotch fir about forty yards away at a sufficient height to allow of a body-box being placed on a cask close to the tree. I had no Standard frames on hand, but a few shallow ones which the bees immediately took possession of without any effort on my part. While they were thus comfortably hiving themselves, I examined the parent hive, No. 2, for queen cells, and saw that one was open and the queen evidently at liberty, the other two being sealed over. I removed the cap from one, out of which soon emerged a worker bee. There is a probable explanation of this in the "B.B.J." of last week. The third cell contained what appeared to me, to be a young queen probably past the imago stage. I then carried the swarm to the hive and shook all the bees into it, giving them in addition two brood frames, taken from other hives to strengthen the stock. When the swarms issued from No. 2, the stock was supered with eight shallow frames, these having been put on two weeks prior to first swarm issuing. There are now no bees above the excluder, and I should be glad to know, if possible: 1. What I can do to get the super completed? 2. Is July a good time to drive bees from the skep into a W.B.C. Hive? 3. When is the proper time to unite two swarms which are now very weak? I may say in conclusion, that all I know about bees and any ability I may possess, and all my manipulating are entirely due to the "Bee-keeper's Guide," which I shall not fail to recommend to any bee-keeper I may come across. I send my name for reference and sign G. R., Carmarthen.

REPLY.—It is quite difficult to get supers completed by stocks that have sent out swarms unless the season is a very good one. The fact of bees leaving the super altogether since the

swarm of June 11, shows that there are not very many bees left below, and your only chance lies in a continuance of the ingathering for a fortnight or more from this date. 2. The best time to drive bees from the skep is twenty-one days after the first swarm came off. At that time the combs are broodless and the young queen heading the stock will have been mated. 3. Autumn is the best time for uniting weak stocks.

Bee Shows to Come.

A nominal charge of 2s. 6d. is made for notices (not exceeding 7 lines) in this column, 10 lines charged 3s. 6d., up to 15 lines 5s., which covers cost of insertion from order till date of show. Cash should accompany orders for insertion.

July 19 and 20, at Gainsborough.—Show of Honey, Hives, and Bee Appliances in connection with the Lincs Agricultural Society. Bee Department under management of the Lincs B.K.A. Fourteen classes. Liberal money prizes and silver medals. Schedules from R. Godson, Hon. Sec., Lincs B.K.A., Tothill, Alford, Lincs. **Entries closed.**

July 25 and 26, at Cardiff.—Annual Show of the Glamorgan B.K.A. in connection with that of the Cardiff and County Horticultural Society. Honey, Wax, Appliances, etc. Classes for members, novices. Five open classes, with prizes for sections and Bee-appliances, 30s., 15s. Entry fee for one or more of the open classes to non-members, 2s. 6d. Schedules from Wm. Richards, Hon. Secretary, The Red House, Gabalfa, Cardiff. **Entries close July 20.**

August 1, at Henbury, near Bristol.—Annual Show of Honey and Wax, of the Henbury District Beekeepers' Association, with bee lectures, by County Council's expert, in connection with the Horticultural Society's Exhibition. Open classes, good prizes (classes with free entry). Apply Hon. Sec., J. Atkin Waller, Pen Park, Westbury-on-Trym, Bristol. **Entries close July 25.**

August 1, at Bishop's Stortford.—Honey Show in connection with Bishop's Stortford Flower Show. Open classes. Schedules from W. J. Ritson, Stansted, Essex.

August 1, at Upwell, Wisbech.—Horticultural Society's Show. Open classes for Honey, including gift class for 11b. jar. Schedules from Hon. Sec., J. Hy. Inman, Upwell, Wisbech. **Entries close July 28.**

August 2, at Wallop, Hants.—Honey Show in connection with Wallop Horticultural Society will be held in the grounds of Wallop House by kind permission of Mrs. Ross. Open classes. Apply Dr. Burt, The Grange, Nether Wallop. **Entries close July 25.**

August 6 (Bank Holiday) at Cambridge.—The Cambs and Isle of Ely Beekeepers' Association have arranged for a show of Honey, Wax, and Bee Appliances, at the Mammoth Show to be held in Cambridge on the above date. Liberal prizes are offered. Each class is open to all the world. The gift classes being presented to local charities. Schedules from the Hon. Sec., G. E. Rogers, Beecholm, Cambridge. **Entries close July 30.**

August 6 (Bank Holiday), at Melton Constable Park. — Annual Show of the North Norfolk B.K.A. Schedules from C. J. Cooke Edgefield, Melton Constable. **Entries close July 28.**

August 8 to 10, at Middlesbrough.—Show of Honey, etc., in connection with the Royal Yorkshire Agricultural Society. Schedules and form of entry from John Maughan, Secretary, Blake-street, York. **Entries closed.**

August 8, at Clevedon, Somerset, in connection with the Horticultural Show.—The Somerset B.K.A. will hold its first annual Honey Show as above. Several open classes. Schedules from Louis E. Snelgrove, Hon. Sec., Cromla, Locking Road, Weston-super-Mare. **Entries close July 28.**

August 9, at Abingdon Park, Northampton. — Honey Show of the Northants B.K.A. Special prizes, including the Baroness Burdett Coutts' prize hive for cottager members, also three open classes, including one for single 1-lb. jar honey. (**Entry free.**) Prizes, 20s., 10s., 7s. 6d., and 2s. 6d. Schedules from R. Hefford. Hon. Sec., Kingsthorpe, Northants. **Entries close August 3.**

August 9, at Madresfield, Malvern. — Annual Show of the Worcestershire Bee-keepers' Association. Open class. Schedules from Mr. Geo. Richings, 2, Shrubbery Terrace, Worcester.

August 15, at Wye.—Kent Honey Show. Sixteen classes for Honey and Bee Products. Greatly increased cash prizes; Classes 1 to 11 open to Kent; Classes 12 to 16 open to the United Kingdom. Open classes include—Single 1-lb. jar light extracted honey; single 1-lb. jar dark ditto, 20s., 10s., 5s., in each class; 1-lb. section, silver cup. Trophy class First prize silver cup, value £3 3s. Best collection of Bee Appliances, first and second prizes. Special arrangements for Bee Demonstrations and many other new attractions added this year. Schedules on receipt of stamp from J. Tippen, Secretary, Wye, Ashford Kent. **Entries close August 10.**

August 16, at Yetminster, Dorset. — Annual Show of the Yetminster and District B.K.A. held in a field kindly lent by Mr. Jolliffe. Four open classes, including three 1-lb. jars extracted honey, three 1-lb. sections, and cake of beeswax. Schedules from G. Leeding, Hon. Sec., Bradford Abbas, Sherborne. **Entries close August 10.**

August 17. — In Public School, Portwilliam, Wigtownshire.—Honey Show in connection with the Horticultural Society. Classes for sections and extracted honey, open to amateurs and cottagers. Challenge class (open to all) for three 1-lb. jars extracted honey; prizes, 20s., 12s., 8s., and 4s.—Schedules from Secretary, Horticultural Society, Portwilliam, N.B.

August 22 and 23, at Shrewsbury.—Annual Show of the Shropshire B.K.A. in connection with the Horticultural Society's Great Floral Fête in "The Quarry," Shrewsbury. Seven open classes for honey. Classes with free entry for single 1-lb. jar and single 1-lb. section. Schedules from S. Cartwright, Hon. Secretary, Shawbury, Shrewsbury. **Entries close August 10**

August 24, at Exeter.—Annual Show of the Devon B.K.A., in conjunction with the Devon and Exeter Horticultural Society. The Baroness Burdett-Coutts' prize, hive for the best exhibit shown by cottager members, Dr. Philpott's prize of £1 1s., for the two best sections of comb honey. All open classes. Schedules from the Hon. Sec., A. S. Parrish, Heavitree Road, Exeter. **Entries close August 18.**

August 29, at Chester.—Cheshire B.K.A. Show in connection with the County Agricultural Society. Open classes for Hives, Observatory Hives, Sections, and Extracted Honey. Baroness Burdett-Coutts' prize hive for best exhibit shown by cottager member. Seven classes for members. Schedules from T. A. Beckett, St. Werburgh Chambers, Chester. **Entries Close August 8,** or at double fees, **August 15.**

August 29, at Forbury Gardens, Reading.—Honey Show of the Berks. B.K.A. Schedules from the Hon. Sec., D. W. Bishop-Ackerman, 161, King's Road, Reading. **Entries close August**

August 30, at Montgomery.—Honey Show in connection with Horticultural Exhibition. Two open classes for six 1-lb. sections and six 1-lb. jars extracted honey. Prizes, 10s., 5s., 2s. 6d. Entry fee, 1s. each class. Schedules from Mr. W. J. Jones, Secretary, Montgomery. **Entries close August 23.**

September 8, at Dumfries.—South of Scotland B.K.A. 14th Annual Show of Honey, Bees, and Appliances. Five open classes—viz., three 1-lb. jars, three 1-lb. sections, and for single jar and section (free entry), and cake of wax; also handsome money prizes and valuable medals, for members only. Schedules from Jas. Johnstone, Sec., Nelson Street, Maxwelltown. **Entries close September 1.**

September 12 and 13, at Edinburgh.—Thirteenth Annual Exhibition of Midlothian B.K.A. in Waverley Market. Open classes for six sections heather, six sections flower, six jars heather, six jars flower. Prizes, 15s., 10s., 5s. Entry, 2s. per class. Schedules from W. Weir, Heriot, Midlothian.

September 13, at Castle Douglas.—Honey Section, Dairy Show. Liberal prizes. Five open

classes—viz., three 1-lb. jars, three 1-lb. sections, single jar, single section, and for cake of beeswax. Schedule from Jas. Johnstone, or from L. Aird, Hardgate Schoolhouse, Dalbeattie. **Entries close September 1.**

September 8 to 15, at the Agricultural Hall, London.—Honey Show in connection with the Confectioners', Bakers', and Allied Traders Annual Exhibition and Market. (See large advertisement on page i.) **Open to all British Bee-keepers.** Entry fee in each class one shilling. Schedules from H. S. Rogers, Secretary, Exhibition Offices, Palmerston House, Old Broad Street, London, E.C.

September 20, 21, and 22, at Crystal Palace.—Surrey B.K.A. Annual Exhibition of Bees, Honey, Wax, and Appliances, etc. Twenty-six classes (ten open to all). Increased prizes and medals. Schedules from F. B. White, secretary, Marden House, Redhill, Surrey. **Entries close September 7.**

September 22 to 29, at the Agricultural Hall, London.—Honey Show in connection with the Twelfth Annual Exhibition and Market of the Grocery and Kindred Trades. Nearly £50 in prizes for honey and beeswax including four prizes of £4, £3, £2, and £1, in honey trophy class. **Open to all British Bee-keepers.** Schedules from H. S. Rogers, Secretary, Exhibition Offices, Palmerston House, Old Broad Street, London E.C.

September 26, at Altrincham.—Show of Honey Products, in connection with Altrincham Agricultural Show. Open to United Kingdom: Classes for Hives, Observatory Hive, 12 Jars Extracted Honey. Open to County of Chester only: Classes for Trophy, Amateur-built Hive, Two Shallow Bars, 12 Jars Run, 12 Sections, Wax, etc. Special classes for cottagers. Special classes for Society's district. Liberal prizes. Low entrance fees. Schedules from Mr. J. H. Hall, 2, Dunham Road, Altrincham. **Entries close September 9.**

October 9 to 12, at the Agricultural Hall, London.—Show of Honey and Bee Produce in connection with the British Dairy Farmers' Association. Numerous and liberal prizes for honey, etc., including the valuable Silver Challenge Cup of the B.B.K.A. Schedules from Mr. Wm. C. Young, Secretary, 12, Hanover Square, London, W. **Entries close September 12.**

Notices to Correspondents & Inquirers.

GEO. EMSLY (Aberdeenshire).—The name of the insect sent is *Trichiosoma*, a kind of saw-fly. Though belonging to the same natural order as the honey-bee, it is a very different insect, the larva being a caterpillar which feeds on the leaves of trees.—F.W.L.S.

J. B. KERSHAW.—The box contains two females of the common solitary bee, *Andrena fulva*.—F.W.L.S.

W. T. (Hollingbourne).—Re-queening Stocks.—If the stocks have not swarmed for two seasons, it will be advisable to destroy the queens and let the bees re-queen themselves without delay, as soon as you can remove surplus-chambers now on the hives.

G. W. A. (Carlisle).—Mr. F. R. Cheshire.—This well-known scientist commenced bee-keeping in 1871, and died September 16, 1894. We cannot give his age.

H. T. B. (Stroud).—Honey for Showing.—Honey sent is from clover, and, except for being a bit thin, would do for the show-bench. It is quite good enough for a local show.

G. D. (Malmesbury).—Honey for London Shows.—The flavour, colour, and aroma of sample are all good, but its consistency is hardly dense enough for a large London show. It might be improved in this respect by warming in water heated to about 90deg. to 100deg. Fahr.

ELAD (Salisbury).—Transferring Bees from Cross-built Combs.—Our advice is to let the bees transfer themselves in spring, as directed in "Guide-Book.' You would, by so doing, secure the present season's crop, and could winter the bees better than by driving the bees in autumn and compelling them to winter under bad conditions. Cane-sugar syrup will do as well as honey for feeding-up with.

J. A. (Grangemouth).—Queen Lost on Mating-Flight.—Owing to our enforced absence from town, your letter has been overlooked, and a reply now will be useless. If you will send a line to say how the stock stands at present, we will reply in following "B.B.J."

T. S. (Carlisle).—Queen Laying in Sections.—It is best to allow the drone-brood in sections to hatch out, after which any honey found in them may be extracted. It is quite probable that no more eggs may be laid in sections.

MAGNUM ASENDIUM (Bulwell).—Bee Nomenclature.—The numbered specimens sent are as follows: (1) (alive) slightly crossed with Carniolans; (2) (also alive) common variety, showing slight cross, as before, with carniolan blood; (3) (dead) common kind.

G. H. (Kent).—Honey Shows.—(1) See the list of "Shows to Come" in this issue for date of show. (2) Spacing Frames with "W.B.C." Ends.—When "starters" only are used for swarms, the narrow spacing will prevent bees from building drone-comb, but when combs are built-out, the "ends" should be fixed at normal distance apart. (3) Driven Bees.—It is only needful to feed the driving bees rapidly, if got first week in August. They will build out combs before weather becomes too cold. Twenty pounds of cane sugar will make enough syrup to render the bees safe for winter.

G. C. (Margate).—Breeding from Selected Queens.—Do not follow any improvised plan of your own for queen-rearing; follow the methods proved to be workable, practicable, and successful. To do otherwise is to court failure. Consult the pages of "Guide-Book," or read Mr. Sladen's work on "Queen-Rearing in England." Either of these works will tell you all about the subject you are interested in.

Suspected Combs.

F. ARTHUR (Rhyl).—Comb contains nothing worse than pollen.

J. H. N.—The sample sent is quite useless for diagnosing foul brood. Will you therefore please send on a piece about 2in. or 3in. square containing suspected cells, just as removed from the hive, without probing or disturbing the larvæ, we will then do our best for you.

A. H. (Tring).—Bad case of foul brood; treat as advised in "Guide-Book."

INQUIRER (Devon).—Your sample shows a typical case of "black brood," only that the dead larvæ has not reached the hard stage which follows later on.

J. B. H. (Huntly, N.B.).—Sample is affected with foul brood, but not of virulent type.

E. S. H. (Totteridge).—Comb sent has never been bred in at all. It contains pollen only.

Special Prepaid Advertisements.

Twelve words and under Sixpence: for every additional Three words or under, One Penny.

FOR SALE, 16 healthy stocks of BEES, in good hives (2 in "Wells" hives), with Abbott's broad-shouldered frames; also several empty hives, frames, supers, and other appliances; well-made hut, on wheels, good as new, cost £8, will take £5. Will sell the lot cheap, or separately if desired.—Further particulars from R. CHAPMAN, Bee Farm, Newton, Kettering R 35

NEW LIGHT SCOTCH CLOVER HONEY, £3 cwt.; sample 3d. Deposit.—GILBERTSON, 43, High Street, Annan, Dumfriesshire. R 23

WANTED, 1-lb. SECTIONS NEW HONEY.—Price and particulars to T. G. TICKLER, Pasture Street, Grimsby.

VERY Strong Stock of "NEVER SWARM" BEES, crowded on ten standard frames, in nearly new hive, with lift, complete. What cash offer?—MULLEY, Upton-on-Severn. R 31

WANTED, a few cwts. LIGHT HONEY. Sample and lowest price to SHACKLETON, Thorner, near Leeds. R 22

QUEENS, specially selected from honey-gathering stocks; fertile Black English, 1906, in introducing cage, 2s. 8d., free, by return post; LIGHT EXTRACTED HONEY, 52s. 6d. cwt.; in screw-cap jars, 8s. dozen, sample 2d.; HONEY TINS (new), extra strong, no leaking, air-tight lids, 8s. 6d. dozen, 30lbs. capacity; COMBS BROOD, suit driven bees, healthy, 7d. each.—CHARTER, Tattingstone, Ipswich. R 21

HEALTHY DRIVEN BEES WANTED, in four, six or eight-pound lots, first and second week in August. Will give 1s. per pound, provide travelling boxes, and pay carriage. Cash by return post after receipt of bees. J. BALMBRA, East Parade, Alnwick. R 24

FOR SALE, three good secondhand HIVES, free from foul brood; newly painted; 5s. each.—H. FLY, "Alwinton," Godstone Road, Purley. R 25

TWO STRONG HEALTHY NATURAL SWARMS FOR SALE.—ANWYL, Frondeg, Machynlleth. R 26

WANTED, RIPENER and STRAINER, two cwt., with lift preferred.—FRASER, 9, Rheda Terrace, Heator Moor. R 19

OVERSTOCKED; 24 SWARTHMORE Mating boxes, 7d. each.—DAWSON, Rookery Lane, Wolverhampton. R 34

1100 SECTIONS; also RUN HONEY, packed to requirements; offers invited.—THE RAEBURN APIARIES, Sawbridgeworth. R 33

WANTED, two Stocks of HEALTHY BEES, with hives; state price.—J. HOWARTH, 52, Bury Road, Tottington, Lancashire. R 28

WANTED, secondhand GEARED EXTRACTOR, in good condition; Cowan preferred.—Particulars, GILL, West Street, Boston. R 32

1906 SELECTED QUEENS, Woodley's strain, guaranteed healthy and safe arrival in safety; introducing cages, 3s. 6d.; Virgins, 1s. 3d.—TOLLINGTON, Woodbine Apiary, Hathern, Loughboro'. R 29

SECTION GLAZING.—Best quality lace paper, made especially for bee-keepers' use; 100, in white pink, green, or blue, 6d., 300 1s. 4d., 500 2s. 2d., 1,000 3s. 9d., post free; lace one side, lace bands (lace both sides), white 2⅞, 3 and 3¼ wide, 100 1s. 2d., 200 2s. 3d., 500 4s.; a few in pink and blue, 100 1s. 4d., 200 2s. 6d., post free.—W. WOODLEY, Beedon, Newbury. R 27

FOR SALE, FOUR STOCKS, in modern frame hives, with healthy young Queens. No reasonable offer refused.—GLANFIELD, Nutfield, Nursling, Hants R 20

TWELFTH YEAR.—Healthy DRIVEN BEES, with fertile Queens, early in August; cash with order; orders in rotation; 1,000 SECTIONS wanted.—W. SOLE, Certified Expert, Poplar Grove, New Malden, Surrey. R 36

ENGLISH HONEY PURCHASED in any quantity for prompt cash. Send sample, stating quantity, and we will send prompt offer for all you have.—SPRING AND CO., LTD., Brigg, Lincs. R 17

SECTIONS and EXTRACTED HONEY, in bulk; first quality; sample, 3d.—PULLEN, Ramsbury, Hungerford. R 12

DRIVEN BEES, with Queens, commencing August; 3s. 6d. per lot, cash with order; boxes returned; orders in rotation.—T. PULLEN, Ramsbury, Hungerford. R 11

TWO new, two old HIVES, on ten Standard Frames, 32s. and 25s. each; Well's Hive, with rack of 2lb. sections, £1.—ENGLISH, 16, Lister Street, Scotswood. R 9

HEALTHY DRIVEN BEES, commencing August; delivery to August 20, 4s. per lot; after this date, 5s. 6d.; orders cash; delivered rotation; boxes returnable.—H. C. SMITH, The Apiary, Woodmancote, near Cirencester. R 10

1800 lbs. SPLENDID NEW WHITE CLOVER HONEY, £3 per cwt.; sample, 2d.; in 28lb. tins, same rate.—ALBERT COE, Apiary Hall, Ridgewell, Halstead, Essex. R 18

READY for Delivery, healthy FERTILE QUEENS (1906), 3s. 6d., in introducing cages, post free.—CARBINES, Bee Expert, Cardinham, near Bodmin, Cornwall. Q 95

STING PROOF GLOVES, 2s.; with sleeves, 2s. 6d., post free. Why pay more?—KENT, Manufacturer, Dorchester Q 93

TILLEY'S PATENT ("Won't Leak") SECTIONS, sample 6d., post paid. Complete Super, 3s. 6d., on rail. Brace Sections, odd pieces of nice honeycomb, also well-built Sections, should all be put in the above and placed on the hive, the bees will enter and make saleable.—J. T. GODWIN, Agent, Dorchester. Q 90

HONEY EXTRACTOR, 19s. 6d., cost 25s.; large Wax Extractor, 8s. 6d., worth 12s. 6d.; both new; genuine bargain; free on rail.—HEWETT, Ironmonger, Alton, Hants. Q 86

IN one of the prettiest villages in East Devon, on a Bee farm; FURNISHED APARTMENTS.—SOUTHCOTT, Gittisham Apiary, Honiton. Q 73

HOLIDAYS.—Cornwall; delightful situation near sea and Land's End; 30s. — S. HARBORNE, Apiary, St. Bunyan, R.S.O. Q 69

QUEENS (celebrated Doolittle strain of Improved Italians).—A customer writes: "The virgin I had from you last year has done splendidly. Stock now on 33 Standard Frames." Virgins, 1s. 6d.; Fertiles, 5s. Safe delivery guaranteed. First come, first served.—DAVID TAYLOR, Ilminster. Q 64

WANTED, SECTIONS, first quality; prompt cash; also extracted per cwts.—W. CHILTON, Brookside, Polegate, Sussex.

NEW SECTIONS, HONEYCOMB.—Supplies wanted, at once.—SMITH, Cambridge Street, Hyde Park. Q 29

COMFORTABLE APARTMENTS for Brother Bee-keepers visiting Douglas. Terms: Tea, bed, and breakfast, 3s. 6d; or full board, 5s. per day.—MORSLEY'S, Merridale House, top of Castle Drive, Douglas, Isle of Man.

PROTECT YOUR FRUIT.—Tanned Garden Netting, only best quality supplied. Order promptly, as nets are scarce and must be dearer. 25 x 8 yds., 50 x 4, and 100 x 2 yds., 9s. each. Add ten per cent. for other sizes.—L. WREN AND SON, 139, High Street, Lowestoft. Q 92

Editorial, Notices, &c.

BRITISH BEE-KEEPERS' ASSOCIATION

The monthly meeting of the Council was held on Thursday, July 19, at 105, Jermyn Street, S.W., Mr. T. W. Cowan occupying the chair. There were also present Dr. Elliot, Messrs. W. Broughton Carr, J. B. Lamb, W. F. Reid, E. Walker, and the secretary. Letters explaining unavoidable absence were read from Miss Gayton, Messrs. R. T. Andrews, R. Godson, W. H. Harris, J. P. Phillips, and A. G. Pugh.

The minutes of the previous meeting were read and confirmed.

Three new members were elected, viz:—

Mrs. S. S. Lee, Monro Lodge, Littlewick, Maidenhead.

Mr. G. Buchanan Simpson, Briarbank, Bedford.

Mr. Alex. Willmott, Bartholomew Close, E.C.

The report of the Finance Committee was presented by Dr. Elliot, with details of receipts and expenditure to date, and was duly approved.

Arising out of some correspondence in regard to the recent examination for first class certificates, a suggestion was made that, in future, candidates be not required to complete the examination in one day, but that the paper-work and lecturing be taken on separate dates. This matter is to be further dealt with at a future meeting.

In response to applications received, a number of appointments of judges and examiners were made to officiate at fixtures in various districts.

Acting on the recommendations of examiners whose reports were received, the Council resolved to grant third-class certificates to the undermentioned candidates, viz.:—

Misses Janet Barlow, Ida Brown, —— Capper, Amy Cross, Dorothea Cockin, —— D'Ombrian, Florence Dyer, Caroline Hulbert, Nora Hunter, Ethel James, Margaret Legg, Gladys Lewin, —— McLaughlin, Violet Mackie, Margaret Macintyre, Gwendolin Price, Florence Pocock, Alison Ransford, Margaret Ricardo, Winifred Saunders, Eva B. Sinckler, Gladys Towsey, Elizabeth Tudor; Messrs. Geo. Bakewell, Jas. Bakewell, W. H. Bird, W. Henson, Fredk. W. Hunt, James Kennan, R. Monerieff, Rev. W. Roberts, and Dr. H. W. L. Waller.

It was decided to ascertain the feasibility, and probable cost, of making an appeal on a point of law against the decision of Judge Emden in the case recently heard at Dartford, Kent, to the effect that there was "no more property in bees than in birds that alighted in trees."

A somewhat lengthy discussion ensued on the proposals for alteration of date of future insurance policies. In deference to the expressed wishes of several affiliated associations, it was resolved to apply for a new policy commencing on March 25, 1907, and terminating on March 25, 1908, and to endeavour if possible to extend the risks under the existing policy from August 1 to March 25 next ensuing. This will be done if suitable terms can be arranged with the underwriters, but otherwise the insurances will cease during the approaching winter season, when the risks are practically nil.

Next meeting of Council, Thursday, September 20.

SPECIAL NOTICE

RE INSURANCE FOR BEE-KEEPERS.

The attention of all interested in this matter is directed to the above announcement in the report of the meeting of Council of the B.B.K.A., from which it will be seen that the new policy is to commence on *March* 25, 1907, instead of August 1, 1906, and that, in order to effect the necessary change of dates, the insurances will cease during the ensuing interval, unless special arrangements can be made for the extension of the risks under the policy which terminates on August 1. A further announcement will be made in due course, until when *no further premiums should be remitted.*

LINCS. AGRICULTURAL SOCIETY.

ANNUAL SHOW AT GAINSBORO'.

The Annual Show of the above society was held at Gainsboro' on July 18, 19, and 20. The honey department was, as usual, under the management of the Lincolnshire B.K.A., and an excellent show both of honey and appliances were exhibited; among them being four splendid trophies of honey and three fine collections of appliances.

The total entries reached the satisfactory number of 107. Mr. W. Herrod gave lectures and demonstrations with bees in the bee tent on each day, which were not only well attended, but the public clamoured for more. Altogether, the show was a great success.

Mr. F. J. Cribb, Retford, and the Rev. Sidney Smith, Wheldrake Rectory, York, officiated as judges and made the following awards:

MEMBERS ONLY.

Exhibit of Comb, or Extracted Honey and Wax; staged on space 4 ft. by 4 ft.—1st, T. S. Holdsworth, Kirton-in-Lindsey; 2nd, W. Patchett, Cabourn, Caistor; 3rd, A. W. Weatherhogg, Willoughton.

OPEN CLASSES.

Twelve 1-lb. Sections. — 1st, A. W. Weatherhogg; 2nd, J. W. Seamer, Grimsby; 3rd, R. Godson, Tothill, Alford, Lincs.

Twelve 1-lb. Jars Extracted Honey. — 1st, D. Seamer; 2nd, J. Pearman, Derby; 3rd, T. Blake, Stockbridge, Hants; 4th, W. Hatliff, Grasby, Lincs; reserve No. W. Patchett.

MEMBERS' CLASSES.

Twelve 1-lb. Sections. — 1st, A. W. Weatherhogg; 2nd, T. W. Swabey, Lincs.; 3rd, W. Patchett; 4th, D. Seamer.

Twelve 1-lb. Jars (Light) Extracted Honey. —1st, W. Patchett; 2nd, Miss Ada Morley, Wellingore, Lincs.; 3rd, D. Seamer; 4th, T. S. Holdsworth; reserve No. R. Godson.

Twelve 1-lb. Jars Extracted Honey (other than Light).—1st, J. Househam, Huttoft, Lincs; 2nd, T. S. Holdsworth; 3rd, G. R. Arrand, Heapham, Gainsboro'; reserve, F. W. Gelder, Gainsboro'.

NOVICES ONLY.

Twelve 1-lb. Jars Extracted Honey.— 1st, T. W. Swabey; 2nd, L. Stephenson, South Thoresby; 3rd, Rev. H. Larken, Nettleham, Lincs; reserve, H. Hill, Carlton-le-Moreland.

Twelve 1-lb. Jars Granulated Honey. — 1st, T.S. Holdsworth; 2nd, F. W. Gelder; 3rd, Miss Ada Morley.

Bees' Wax.—1st, W. W. Davy; 2nd F. Harris; 3rd, F. W. Frusher.

OPEN CLASSES.

Observatory Hive with Bees and Queen.— 1st, Jas. Lee and Son, London; 2nd, T. W. Swabey, Lincoln; 3rd, D. Seamer, Grimsby.

APPLIANCES.

Collection of Hives and Appliances. — 1st, Jas. Lee and Son, London; 2nd, W. P. Meadows, Syston; 3rd, E. H. Taylor, Welwyn.

Complete Frame-Hive for General Use.— (Cost not to exceed 25s.).—1st, W. P. Meadows; 2nd, Jas. Lee and Son; 3rd, W. R. Garner, Dyke, Bourne.

Complete Frame-Hive (cost not to exceed 12s. 6d.).—1st, W. P. Meadows; 2nd, E. H. Taylor; 3rd, Jas. Lee and Son.

New Appliance Connected with Bee-Keeping. 1st, Rev. R. M. Lamb, Burton Pidsea, Hull; 2nd, W. P. Meadows. (*Communicated.*)

Correspondence.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper We do not undertake to return rejected communications.

AMONG THE BEES.

SECTIONS AGAIN.

[6371.] *Six and Half-a-dozen.*—Quoth J. M. Ellis (6345, page 255) "Quality of honey a year old is perfect. Perhaps this may be credited to its being better ripened in the thinner combs." Perhaps, but perhaps not! Reader, just turn back a leaf to 2nd column on page 253, and see what the writer of the lines sayeth there:—"Sections now being taken from storehouse are as fresh as they were in August, and as yet they show no signs of granulation." These latter were the despised and reviled 4¼ by 2 in. Hear what M. A. Gill—with his 1,000 odd hives—says of them. "If I were to start anew, I would adopt the old 4¼ by 4¼ section, because it doesn't take any talking or explaining to sell even a car-load of them." The authors of "Modern Bee-Keeping" give it as their opinion that the "chief advantage of the tall section is that it is more pleasing to the eye, conveying the impression that it contains more honey, but this point is not of sufficient importance to warrant a bee-keeper in changing fixtures." Dr. Miller reports "that his market does not like them better, if as well, as the square section." I could go on quoting *ad infinitum* slighting, deprecating, or condemnatory opinions of our tall acquaintance, but let my heading stand.

Misnamed Flowers.—The name "buttercup" is cited as a misnomer. Cows shun it in eating grass, and instead of improving milk or butter it helps to give it a bitter and undesirable taste. The honeysuckle, instead of being a bee-flower, as its name would imply, is not visited by the bee at all, for the good reason that its tongue cannot penetrate so deep as to allow any sucking up of whatever nectar the bloom may contain. Now and again we hear of red clover bees, and I fancy I remember seeing them advertised in this country, but after extensive observation I can confidently affirm that I never saw one single bee waste time even trying to sip from a main crop of red clover. Its prescience teaches it that such a vain quest would be time and labour lost. Butterwort is another misnomer, being a flower with a very sharp acrid taste. It deserves notice, however, because it has the ability

to trap, and actually *eat*, quite a large number of small flies. A viscid exudation from its leaves gums down the struggling fly, and the more it seeks to free itself, the more of this gluey substance is poured on it, while the leaf rolls inward to still further trap it. Then, at leisure, the plant quietly proceeds to *digest* the fly—all but the skeleton, which it ejects.

Queen Breeders, or Queen Rearers.—How many bee-keepers have we got fit to be classed in the first category in our country? I have my doubts! It may be heretical to say so, but I fear we have only *Rearers* of Queens. For one thing the demand is too small to induce a good man to devote much of his time to the necessary work. Then, few remain so long in the ranks as to make a full study of this intricate question. Also, bee-keepers are content to accept any queen sent them whatever its pedigree may be. A colony may do well one or two seasons, raising immense populations, and incontinently its owner rushes to the conclusion that here is the source for his future mothers. He acts on the impulse (it is nothing else), and floods the market with his queens, even gets fancy testimonials telling wonderful stories of their "prolificness." Yes! But what of their comb-building, their honey-gathering, qualities, their capping attainments? What of their temper, their hardihood, their longevity, their working qualities, their staying powers, their powers of offence and defence, and a host of other points all worthy of consideration? How many of those who supply queens give much more than a passing thought to drone production? In every other line of life *special* consideration is given to the males; but here we have joining in the race the lame, the halt, and the blind, the weak and decrepit, the puny and the stunted, reared in worker cells. Nay, even our bee-books tell us these latter can do duty, whereas the whole crew should be rigidly swept away, miles from any queen-rearing apiary. As to race, who cares? Cyprian and Syrian wasps have blent their blood with nobler races, handing down their demon tempers to many generations. The whole "mongrel crew" scattered broadcast over our land, crossed and intercrossed, have contaminated the purity of the native race and have handed down undesirable traits we will never eliminate, seek as we may. But nobody ever seeks. What our queen breeders desire above all, apparently, is to push their particular strain, thus tending to disseminate all over the land a heterogeneous compound of all and sundry, a kind of conglomerate of the worst as well as the best.

A Labour of Love.—"Whosoever will have profit and commodity of bees, must overlook them many times, because they require much more diligence, pains, and industry, than either expense or cost, Notwithstanding to those that love them, it is rather to be termed a pleasure and delight, than any irksome or laboursome toil; for what is it to spend a quarter of an occasional hour amongst them to overlook their wants." So wrote Levitt about the year 1600, and we moderns will all acknowledge the wisdom of his words. The "toil" is not excessive at any time of the year, but now, and for some months to come, that quarter of an hour, two or three times a day, will be of great advantage both to bees and bee-keeper. Under modern methods this is particularly true while swarming and supering need attention. The pleasure and delight will be greatly augmented by the results accruing from the benefits of this care and attention. —D. M. M., Banff.

QUEEN RAISING.

IN MINIATURE HIVES.

[6372.] Perhaps my last contribution (page 256) was not sufficiently clear. I have not, so far, tried to raise queens from the egg in these small boxes, but have succeeded in getting them from sealed cells placed in such boxes. My mating-boxes are made to take three sections cut down to 7-8 in. width, and each fastened to a top-bar. These boxes take three such miniature frames hung side by side as in an ordinary hive; I get some brood raised in them first, then give the cells. I have had ordinary brood hatched in these boxes after putting in an old fertile queen and as many bees as they would hold, the combs being almost built-out to begin with. My experiments are not yet complete, and it will require another season before a definite result is arrived at. But they show that the above plan succeeds.

As regards getting new queens by removing the old one, the plan will, no doubt, succeed, but it will be a most difficult thing to prevent the bees from swarming if all the queen-cells save one are not cut out at the right time. As I said, it is better to buy queens than to follow this plan, unless special reasons make the practice occasionally desirable.

I am fond of experiments myself, one learns more that way than by the study of books after a certain stage of proficiency is reached.—W. J. Farmer, Cornwall, July 27.

GETTING RID OF FERTILE WORKER.

[6373.] Referring to the hive with fertile worker I recently told you of; three days after writing you I had a swarm from one

of my hives, and having plenty of ripe queen-cells I put one in the hive and left it alone to see what would turn up. A week afterwards I started on my annual holidays, and on returning last night I examined that hive and was very much pleased to find that the ripe queen-cell had become a laying Queen, and a very good one at that. I would not have had the fertile worker, but before putting in the Golden Italian I used it for bringing forward queen-cells. Thanking you for the trouble taken, I send name and sign—J. A., Grangemouth, July 20.

HIVES ON SCALES.

DAILY WEIGHT OF HONEY GATHERED DAILY.

[6374.] I am sending you herewith a few particulars of the work done by one of my stocks of bees; in six days they have increased in weight 54 lb. (full table of times and weights given below). You will see they lose 1½ lb. between 8.0 p.m. and 6.30 a.m., and about another 1½ lb. from 6.30 a.m. to 8.0 a.m. The latter, probably, from bees going out to field work. Do you think they actually consume the other 1½ lb. in the night, or would the honey lose weight by evaporation? Should be glad of your opinion on this as I have mentioned it to one or two bee-keepers and they cannot understand it.

Table showing weight at times named:—

June 18.—8 30 a.m.	67	lbs.
12.0 noon	70	,,
4.0 p.m.	75	,,
6.0 p.m.	77	,,
June 19.—6.30 a.m.	75½	,,
8.0 a.m.	74	,,
12.0 noon	78	,,
4.0 p.m.	81	,,
8.0 p.m.	86	,,
June 20.—6 30 a.m.	84½	,,
8 0 a.m.	83½	,,
2.0 p.m.	90	,,
6 0 p.m.	95¼	,,
Extra Rack of drawn-out Comb, given weighing	10	lbs.
June 21.—8.0 a.m.	103	lbs.
12 0 noon	105	,,
4.0 p m.	109	,,
8.0 p.m.	112½	,,
June 22.—6.30 a.m.	111	,,
8 0 a-m.	110	,,
12.0 noon	111	,,
4.0 p.m.	118	,,
6.0 p.m.	121	,,
8.0 p.m.	124	,,
m 23.—6 30 a.m.	122	,,
8.0 a m.	121	,,
12.0 noon	125	,,
6 0 p.m.	131	,,
8.0 p.m.	132¾	,,

The stock has not been fed or stimulated in any way, but was wintered with an empty shallow-frame rack underneath the brood chamber. This was filled with ten shallow-frames about April 20. On May 12, I put a queen excluder and rack of drawn out shallow-combs on top, and on June 18 placed the stock on the scales at 8.30 a.m. The times of weighing are not quite regular as I am not always at home to attend to it.—JOHN STEVENS.

VIRGIN SWARMS.

[6375.] It may be of some interest to B.B.J. readers to know that a swarm of bees that I had on June 2 again swarmed on Tuesday, July 17, and this notwithstanding the fact that the bees were working in the second rack of twenty-one sections. It occurred on Saturday, when I was giving the hive an overhaul, and had destroyed sixteen queen-cells, my object being to prevent it from swarming. I hived the swarm mentioned, and put it on the old stand. I then gave it the two racks of sections, and intend to unite the old stock to it before going to the moors. Do you think this plan better than if I had returned the swarm to the old hive? This is the first time I have known a swarm give off a swarm the same season. —ALBERT LEE, Co. Durham, July 18.

[If the "virgin swarm" is fairly strong your plan will answer well, otherwise the second plan would be best.—EDS.]

NOTES FROM MID LOTHIAN.

BEES NIBBLING AWAY FOUNDATION.

[6376.] The weather here has been exceedingly cold for some days past, with very heavy rains; consequently our bees working in supers are not getting on for want of warmth and sunshine. I notice our friend, Mr. W. Woodley, in his "Notes by the Way" (page 281), thinks that bees do not nibble away wax to seal over honey. A brother of mine has an exhibition glass-box on one of his hives, with four combs, and in his case the bees started and pulled down one of the combs to seal the remaining three. We see them working busily at it, running about with little bits of comb in their mandibles. The four combs were full of honey at the time this work began, and the bees started at the top to take down the comb, which was 13 in. long, 4¼ in. deep. We never came across the like of it before.—"MAC," Mid Lothian, July 21.

WORKER BEE IN QUEEN CELL.

[6377.] With this letter I am forwarding a queen-cell just removed from one of my nucleus hives. It was quite sealed over when found, but as the date of hatching was past I removed it, and on taking off the capping a worker was revealed, head foremost, in the cell. Having already found three other cells in this state, more care was exercised in removing the insect, the cell wall being cut away. The fact was then made clear that the bee had evidently entered the cell after the queen's exit and commenced to remove the surplus "royal jelly." After securing a "load" of the latter, the bee had evidently turned, and

in doing so the dorsal surface of the abdomen stuck fast to the "jelly," preventing it from leaving, and it was then sealed in. I trust the specimen will travel safely, so that you can see this for yourself. Name sent for reference. — "NOTTID," Berks, July 17.

[The condition of bee sent quite clearly shows how it had been caught in the cell before the latter was capped over by its fellow-workers.—EDS.]

BEES IN COURT.

[6378.] Referring to the case reported on page 283 last week, Mr. Pretty has forwarded you the report of Mr. Beamish's case in the County Court, and seems alarmed at a reversal of English law. The report itself shows that the law is clearly reaffirmed. It seems quite clear that Mr. Beamish did not follow the swarm, but, having excellent reason for believing that the bees were his, sued for their value. Though the law did not substantiate his claim, Mr. Beamish is to be congratulated on the two significant words in the judgment, "without costs."—S. JORDAN, Bishopston, Bristol, July 19.

LEGAL OWNERSHIP IN SWARMS.

[6379.] I would like to draw your attention to a claim recently heard at Dartford, Kent, in which George Young, gardener, Hextable, sued Robert Ball, a neighbour, for the value of a swarm of bees. Young's wife saw the bees belonging to her husband going in a hive belonging to defendant. Judge Emden said it was a curious point that had been raised, and one that had not been raised for centuries apparently. Plaintiff had no case in law. He then referred to an ancient authority which stated that in a swarm of bees that alighted on a tree there was no more property than "in the birds that make their nests therein." He must non-suit plaintiff, but without costs. The law would have to be altered before anyone in plaintiff's position could obtain redress. Referring to the above, I always thought, and believe you have stated the fact in the "B. B. J.," that so long as an owner or his agent does not lose sight of the bees he can claim them or their value. If we are correct, would it not be a good thing for the "B.B.K.A." to inform Judge Emden of the authority in our favour.—T. H. BURGESS, Guinea Street, Exeter, July 17.

[The facts, as stated in former cases, where the legal ownership of swarms was made the subject of dispute have appeared in our pages, and may be referred to by anyone sufficiently interested. But they are somewhat different to the above account, quoted from the *Maidstone Telegraph*. In that case the judge appears to be obviously wrong in stating that the "point" was a "curious one," that had "apparently not been raised for centuries." It has been raised more than once in our time, and decided, on the authority of Blackstone, that if the owner of the hive from which the swarm issues (or someone representing him) sees the swarm leave the hive, and, *without losing sight of the bees*, sees them cluster on a given spot, he can claim and take them as his property. Moreover, he can follow the swarm on to the premises of another person without being held liable for trespass, and if refused permission to take the bees he can recover them (or their value) in the County Court. Our correspondent suggests that the B.B.K.A. should "inform Judge Emdem of the authority in our favour." We fear the only legal course would be an appeal to the higher Court, which means heavier costs than the parent association could well bear.—EDS.]

Queries and Replies.

[3366.] *Swarms Coming Off while Manipulating.*—I had been taking several queen-cells for giving to nuclei, and was driving some confused bees from the coverings into the hive with a very little smoke, when off went a swarm from the top of the open hive and from entrance. I had noticed that a queen-cell had apparently just hatched, and that the cover was still attached to the mouth of cell, though open. Do you think a frightened virgin queen would take flight, if alarmed by a puff of smoke? The bees knit in two clusters, about 10 feet apart, and remained steady while I made preparations for securing them, which I soon did, and placing two skeps with the intention of uniting the bees in one of them, I hived the first lot of bees, which entered well. Then I went to dinner. On returning I found the swarm had deserted the skep and the depleted parent hive was fairly populated again. So I hived the other cluster in its place, and this stock is doing well. What I wish to know is whether two queens went off with the bees when they started to swarm? If there was not a queen with each cluster why did the bees remain steady on the ledge and in the skeps? On the other hand, if there were two queens why did one part of the swarm return to the parent hive? 2. My second query is this:—A swarm went to an inaccessible long branch at the top of a tall pear tree. A neighbour mounted a ladder as far as the bough would bear his weight, and tried with a rake to shake the bees down on to a sheet on the ground. He failed, but about a dozen or so bees fell, and among them the queen, which seems odd. She fell apart from all others. Two bees found her, and remained with her. She must have been hurt, for she died in about an hour. The swarm went back home, but have

done nothing this year, and are doing nothing now. I send the queen, and should like to know what her age is? 3. Is honey from a stock effected with foul brood in spore stage, if well boiled, safe for feeding to bees? B., Lincs.

REPLY.—1. We have had a swarm of carniolans coming off when giving a rack of sections, but not otherwise, or with any other strain of bees. 2. Queen sent was an adult, and has probably been fatally injured while being shaken from the bough. 3. Honey must be boiled nearly two hours before it is safe to use it as bee-food.

[3367.] *Swarming Vagaries.*—I first commenced bee-keeping last year with an old, healthy stock, well reported on by our expert, and early this year, wishing to have another hive, I bought a nucleus colony formed last season and wintered on four frames. This little stock was fed on syrup, as per "Guide Book," all through the spring, until the tenth frame was added on June 14. Whole sheets of foundation were used in each frame, and an additional frame put in only when the others were covered with bees. They were very strong at the end of June, so I gave them a rack of sections. On Tuesday June 3, they had not entered the sections, but on Friday a swarm issued, and after circling round for some time returned to the hive. I therefore ask.—1. Is this an unusual occurence? 2. Why did the swarm return to the hive? I cannot find anything in the "Guide Book" about this, and therefore ask for a line of reply in the "B.B.J.," of which I am a regular and interested reader. I send my name, and sign "Interested, Salop."

REPLY.—1. The bees had evidently made preparations for swarming, and that being so, the room was given too late. 2. It is by no means an uncommon occurrence for swarms to return to their hives after swarming out. Sometimes the queen fails to leave with bees, at others she falls to the ground and is lost—in a word, "bees do nothing invariably."

[3368.] *Bees Refusing to Work.*—As a reader of your journal I should be grateful for advice on the following:—The hive of a neighbour was shown to me a week or two ago with bees swarming on the alighting-board but in a sleepy, listless state. This had gone on for weeks, and the stock had never swarmed. I opened the hive, and found no supers had been put in, and it was crowded up in the roof with bees. I took out five frames full of brood and queen cells, and put them (with the bees on them) into a new hive and put a super on the old hive and five new frames below to replace those removed. I hear the new hive is now doing well, and the old one has the bees hanging about just as before. Can you say what is the matter, and what should be done? M. C. H., Cornhill, N.B.

REPLY.—So far as we can judge without inspection the frames in body and box need renewing. It may be from age or being pollen-clogged, or from other causes, but the facts related above afford no further clue than makes above reply, probably the right one.

[3369.] *Avoiding Superfluous Drones.*—I should be much obliged for your advice (1) as to how I can get worker brood-cells built along the bottom of some combs I have? (2) Do you or any readers of the "B.B.J." know of a cheap solution which can be bought (or made) to kill bracken and other vegetation in immediate vicinity of hives?—"Apis," Pembroke, July 9.

REPLY.—1. Slice a piece off bottom edge of combs, and fix a strip of worker-cell foundation in its place by means of hot molten wax. 2. We cannot help you here. Perhaps some reader will kindly help us in reply to this query?

[3370.] *Dealing with Cross-built Combs.*—As a reader of your valuable journal, and a lover of bees, I should be obliged if you would answer the following questions. Last autumn I bought a strong lot of bees in a frame hive, and upon examination I find that the frames of comb are all joined into one; and as I have on hand some standard frames filled with honey as supers on my other hives, I should like to remove the brace-combs from the brood-box of hive in question, and replace with straight combs. I therefore ask: 1. How am I to remove the combs from hive, as they are all joined together? 2. Could I drive the bees from hive and then remove comb? 3. If so, when would be the best time to operate? Thanking you in advance, —L. NEWTON, Essex

REPLY.—The task before you is so difficult that we should have some knowledge of your ability in handling bees before giving directions for doing the work.

AMERICAN AND COLONIAL PAPERS.

EXTRACTS AND COMMENTS.

BY D. M. MACDONALD, BANFF.

A Slap for the "Baby."—In "A. B. J." Mr. Alley goes for the "baby nucleus," and being one of the most experienced and extensive queen-rearers in the world his opinions have great weight. "Good queens cannot be reared on the baby system, or by the half-starved and half-nourished way some people say they can. There should be plenty of bees to cover all the combs and brood of a nucleus. If I were to start again in the queen-rearing business I would not tolerate small boxes. Take my advice and use the standard frame for nucleus. You will have but one sized frame in the apiary; many styles and sizes are a nuisance. I would use three frames; not less than two in any case. Don't adopt any baby fixtures if you wish to succeed with bees. All the text books on apiculture advise us to "keep all colonies strong." We should keep this fact in mind at all times, print it in capital letters, and post it in some conspicuous place in the apiary." So even in America all are not in love with the baby nucleus. For myself I have quite recently expressed the opinion that it has not turned out an unqualified success on this side.

A "Head" Swarm.—Our language is

being steadily enriched (?) by apicultural terms coined in America. Here is Mr. Hasty enjoying a laugh and calling on even little children to laugh, because we in England call prime swarms head swarms. Well, if the word is used, I for one never either saw it printed or heard it spoken. [Nor have we.—ED.]

Control of Swarming.—The subject is perenially cropping up, and it is a moot point with many whether we are any nearer a full solution than we were years ago. Plans, systems, and new methods crop up annually; only to be discarded or "improved" upon the following seasons. A summary of a long discussion at Chicago seems to be that every single plan had its drawbacks and failed to act according to rule, and one leading bee-keeper even went the length of saying "I would rather pay a man a dollar a day to sit in my apiary and watch for swarms and hive them, than to try any plan of controlling increase that I have discovered yet." Mr. Arthur Wilkes (630, page 274) will find this subject dealt with in August RECORD.

Introducing Queens.—Here is what one who introduces from 300 to 400 queens every year has to say on the subject, and they are wise words:—"This is one of the knottiest of questions, and one that has cost bee-keepers thousands of valuable queens. It has cost us so many that we now seldom try to introduce a queen into a full colony. We would much rather have our young queen hatch in what would be considered a small colony, and then as soon as she commences to lay build it up in two or three days into a strong colony by giving her combs of hatching brood. In this way we never lose a queen; whereas by the introducing method many times the strange queen will be allowed to live only until she has laid eggs four or five days, and the bees begin to have plenty of larvæ to rear a queen from. If it is not convenient to get your queens in a nucleus, then introduce them into small colonies that have no uncapped brood, especially if the queens are valuable ones."

Very "Simple."—"To say that any race is able to resist foul brood when well started is very simple," says J. E. Chambers in "Gleanings." He had tried all manner of cures for foul brood, and came ultimately to the wise conclusion that no process which did not contemplate the removal of every drop of infected honey must end in failure. Allowing the colony to rear a new queen, or giving them a new one, is no true cure. The conclusion the writer comes to must be given in his own words—"I positively know that Italian bees are not proof against foul brood, neither is there a possibility of curing the disease as long as there exists a drop of diseased honey in the hive." He emphasises this by printing it in italics. I would use great big capitals if that would make it sink the deeper into the minds of bee-keepers tinkering with this vile scourge. Anyone who asserts that *any* queen will cure foul brood is "simple"—*very simple.* I, for one, thank thee, Mr. Chambers, for teaching me that word!

How to Place on Sections.—For many years now I have placed on my sections atop of those already on the hive, making certain to have them in position rather in anticipation of the bees' requirements. I was pleased to learn that so excellent a bee-keeper as G. M. Doolittle practises this method. "The super well forward is placed next the brood-chamber on top of this, and on top of this is put the one nearly completed, and on top of the two I place the empty super of sections. The thing sought after is to give room in such a manner that we shall not have a lot of unfinished sections should the season prove poor, and at the same time provide plenty of room for the largest yield anticipated. I think it better to use caution at all times about putting an empty super under a partially filled one, and especially so after having found that by putting the empty one on top better results can be obtained." As this writer advises in another place, readers might "paste this in their hats" for future reference.

Enthusiasm.—Dr. C. C. Miller (now 75 years of age, says: "I was out watching the bees working on the plum blossom. I think I watched them with just as keen interest as I did 45 years ago." Mr. Hutchinson, always enthusiastic, declares: "I must retain the enthusiasm of my youth, or life would lose its chiefest charm. I know that I am following bee-keeping with an enthusiasm equal to that of 30 years ago. A man is just as old as he thinks." Mr. A. I. Root is renewing his youth, and has started again the work of queen-rearing. Mr. Doolittle is quite boyish in his writings, and, judging by them, he is as young in heart and enthusiastic as ever.

On this side we have—first and ablest of all bee-men—Mr. Cowan still among us as senior Editor, though some two years younger than his "junior." Then Mr. W. Woodley—now in his sixtieth year—renewing his youth, and carrying on his beloved apiculture with as keen ardour and enthusiasm as in his novitiate days. Then our "junior" Editor—does not the very name smack of adolescence?—carries on his apiculture work with such vigour, and enthusiastic zeal that nineteen out of every twenty of our readers imagine he is quite youthful, instead of being in his seventieth year. Our "Grand Old Man" of Bee-keeping.

WEATHER REPORT.

Westbourne, Sussex,
June, 1906.

Rainfall, 1·52 in.
Heaviest fall, 1·00 in. on 28th.
Rain fell on 8 days.
Below average, ·60 in.
Sunshine, 261·9 hours.
Brightest day, 18th, 14·4 hours.
Sunless days, 0.
Above average, 32·9 hours.
Maximum temperature, 78° on 23rd.
Minimum temperature, 37° on 5th and 6th.
Minimum on grass, 35° on 5th.
Frosty nights, 0.
Mean maximum, 65·9.
Mean minimum, 47·1.
Mean temperature, 56·1.
Below average, 0·9.
Maximum barometer, 30·45 on 20th.
Minimum barometer, 29·58 on 1st.

L. B. Birkett.

Bee Shows to Come.

A nominal charge of 2s. 6d. is made for notices (not exceeding 7 lines) in this column, 10 lines charged 3s. 6d., up to 15 lines 5s., which covers cost of insertion from order till date of show. Cash should accompany orders for insertion.

August 1, at Henbury, near Bristol.—Annual Show of Honey and Wax, of the Henbury District Beekeepers' Association, with bee lectures, by County Council's expert, in connection with the Horticultural Society's Exhibition. **Entries closed.**

August 1, at Bishop's Stortford.—Honey Show in connection with Bishop's Stortford Flower Show. Open classes. Schedules from W. J. Ritson, Stansted, Essex.

August 1, at Upwell, Wisbech.—Horticultural Society's Show. Open classes for Honey, including gift class for 1lb. jar. Schedules from Hon. Sec., J. Hy. Inman, Upwell, Wisbech. **Entries close July 28.**

August 2, at Wallop, Hants.—Honey Show in connection with Wallop Horticultural Society will be held in the grounds of Wallop House by kind permission of Mrs. Ross. **Entries closed.**

August 6 (Bank Holiday) at Cambridge.—The Cambs and Isle of Ely Beekeepers' Association have arranged for a show of Honey, Wax, and Bee Appliances, at the Mammoth Show to be held in Cambridge on the above date. Liberal prizes are offered. Each class is open to all the world. The gift classes being presented to local charities. Schedules from the Hon. Sec., G. E. Rogers, Beeholm, Cambridge. **Entries close July 30.**

August 6 (Bank Holiday), at Melton Constable Park. — Annual Show of the North Norfolk B.K.A. Schedules from C. J. Cooke Edgefield, Melton Constable. **Entries close July 28.**

August 8 to 10, at Middlesbrough.—Show of Honey, etc., in connection with the Royal Yorkshire Agricultural Society. Schedules and form of entry from John Maughan, Secretary, Blake-street, York. **Entries closed.**

August 8, at Clevedon, Somerset, in connection with the Horticultural Show.—The Somerset B.K.A. will hold its first annual Honey Show as above. Several open classes. Schedules from Louis E. Snelgrove, Hon. Sec., Cromla, Locking Road, Weston-super-Mare. **Entries close July 28.**

August 9, at Abingdon Park, Northampton. — Honey Show of the Northants B.K.A. Special prizes, including the Baroness Burdett Coutts' prize hive for cottager members, also three open classes, including one for single 1 lb. jar honey. **(Entry free.)** Prizes, 20s., 10s., 7s. 6d., and 2s. 6d. Schedules from R. Hefford. Hon. Sec., Kingsthorpe, Northants. **Entries close August 3.**

August 9, at Madresfield, Malvern. — Annual Show of the Worcestershire Bee-keepers' Association. Open class. Schedules from Mr. Geo. Richings, 2, Shrubbery Terrace, Worcester.

August 15, at Wye.—Kent Honey Show. Sixteen classes for Honey and Bee Products. Greatly increased cash prizes; Classes 1 to 11 open to Kent; Classes 12 to 16 open to the United Kingdom. Open classes include—Single 1-lb. jar light extracted honey; single 1-lb. jar dark ditto, 20s., 10s., 5s., in each class; 1-lb. section, silver cup. Trophy class First prize silver cup, value £3 3s. Best collection of Bee Appliances, first and second prizes. Special arrangements for Bee Demonstrations and many other new attractions added this year. Schedules on receipt of stamp from J. Tippen, Secretary, Wye, Ashford Kent. **Entries close August 10.**

August 16, at Yetminster, Dorset. — Annual Show of the Yetminster and District B.K.A. held in a field kindly lent by Mr. Jolliffe. Four open classes, including three 1-lb. jars extracted honey, three 1-lb. sections, and cake of beeswax. Schedules from G. Leeding, Hon. Sec., Bradford Abbas, Sherborne. **Entries close August 10.**

August 17. — In Public School, Portwilliam, Wigtownshire.—Honey Show in connection with the Horticultural Society. Classes for sections and extracted honey, open to amateurs and cottagers. Challenge class (open to all) for three 1-lb. jars extracted honey; prizes, 20s., 12s., 8s., and 4s.—Schedules from Secretary, Horticultural Society, Portwilliam, N.B.

August 22 and 23, at Shrewsbury.—Annual Show of the Shropshire B.K.A. in connection with the Horticultural Society's Great Floral Fête in "The Quarry," Shrewsbury. Seven open classes for honey. Classes with free entry for single 1-lb. jar and single 1-lb. section. Schedules from S. Cartwright, Hon. Secretary, Shawbury, Shrewsbury. **Entries close August 10**

August 24, at Exeter.—Annual Show of the Devon B.K.A., in conjunction with the Devon and Exeter Horticultural Society. The Baroness Burdett-Coutts' prize, hive for the best exhibit shown by cottager members, Dr. Philpott's prize of £1 1s., for the two best sections of comb honey. All open classes. Schedules from the Hon. Sec., A. S. Parrish, Heavitree Road, Exeter. **Entries close August 18.**

August 29, at Chester.—Cheshire B.K.A. Show in connection with the County Agricultural Society. Open classes for Hives, Observatory Hives, Sections, and Extracted Honey. Baroness Burdett-Coutts' prize hive for best exhibit shown by cottager member. Seven classes for members. Schedules from T. A. Beckett, St. Werburgh Chambers, Chester. **Entries Close August 8,** or at double fees, **August 15.**

August 29, at Forbury Gardens, Reading.—Honey Show of the Berks. B.K.A. Schedules from the Hon. Sec., D. W. Bishop-Ackerman, 16a, King's Road, Reading. **Entries close August**

August 30, at Montgomery.—Honey Show in connection with Horticultural Exhibition. Two open classes for six 1-lb. sections and six 1-lb. jars extracted honey. Prizes, 10s., 5s., 2s. 6d. Entry fee, 1s. each class. Schedules from Mr. W. J. Jones, Secretary, Montgomery. **Entries close August 23.**

September 8, at Dumfries.—South of Scotland B.K.A. 14th Annual Show of Honey, Bees, and Appliances. Five open classes—viz., three 1-lb. jars, three 1-lb. sections, and for single jar and section (free entry), and cake of wax; also handsome money prizes and valuable medals, for members only. Schedules from Jas. Johnstone, Sec., Nelson Street, Maxwelltown. **Entries close September 1.**

September 12 and 13, at Edinburgh.—Thirteenth Annual Exhibition of Midlothian B.K.A. in Waverley Market. Open classes for six sections heather, six sections flower, six jars heather, six jars flower. Prizes, 15s., 10s., 5s. Entry, 2s. per class. Schedules from W. Weir, Heriot, Midlothian.

September 13, at Castle Douglas.—Honey Section, Dairy Show. Liberal prizes. Five open classes—viz., three 1-lb. jars, three 1-lb. sections, single jar, single section, and for cake of beeswax. Schedule from Jas. Johnstone, or from L. Aird, Hardgate Schoolhouse, Dalbeattie. **Entries close September 1.**

September 8 to 15, at the Agricultural Hall, London.—Honey Show in connection with

the Confectioners', Bakers', and Allied Traders Annual Exhibition and Market. (See large advertisement on page i.) **Open to all British Bee-keepers.** Entry fee in each class one shilling. Schedules from H. S. Rogers, Secretary, Exhibition Offices, Palmerston House, Old Broad Street, London, E.C.

September 20, 21, and 22, at Crystal Palace.—Surrey B.K.A. Annual Exhibition of Bees, Honey, Wax, and Appliances, etc. Twenty-six classes (ten open to all). Increased prizes and medals. Schedules from F. B. White, secretary, Marden House, Redhill, Surrey. **Entries close September 7.**

September 22 to 29, at the Agricultural Hall, London.—Honey Show in connection with the Twelfth Annual Exhibition and Market of the Grocery and Kindred Trades. Nearly £50 in prizes for honey and beeswax including four prizes of £4, £3, £2, and £1, in honey trophy class. **Open to all British Bee-keepers.** Schedules from H. S. Rogers, Secretary, Exhibition Offices, Palmerston House, Old Broad Street, London E.C.

September 26, at Altrincham.—Show of Honey Products, in connection with Altrincham Agricultural Show. Open to United Kingdom: Classes for Hives, Observatory Hive, 12 Jars Extracted Honey. Open to County of Chester only: Classes for Trophy, Amateur-built Hive, Two Shallow Bars, 12 Jars Run, 12 Sections, Wax, etc. Special classes for cottagers. Special classes for Society's district. Liberal prizes. Low entrance fees. Schedules from Mr. J. H. Hall, 2, Dunham Road, Altrincham. **Entries close September 9.**

October 9 to 12, at the Agricultural Hall, London.—Show of Honey and Bee Produce in connection with the British Dairy Farmers' Association. Numerous and liberal prizes for honey, etc., including the valuable Silver Challenge Cup of the B.B.K.A. Schedules from Mr. Wm. C. Young, Secretary, 12, Hanover Square, London, W. **Entries close September 12.**

Notices to Correspondents & Inquirers.

*** A correspondent who signs himself "Amateur" (Bristol), in asking "How Long do Bees Live After Losing their Sting?" says: On the 15th inst. I caged a queen with nine workers in a Benton cage, and in the operation four of the bees left their stings in my hand. This morning (16th) they are all still alive and active.

We have received a number of letters and press-cuttings from readers referring to the "bee paralysis" scare, and it was our intention to reprint some information regarding the above-named disease, but owing to the lack of space, we are obliged to defer it for a short time.

"Concerned" (London, E.).—Bees and Jam Factories.—There is no act of Parliament we know of that specially relates to bees. The only claim a jam manufacturer can make against bee-keepers is for damage to stock or a loss of business. We have heard of a case where it was found necessary to cover the windows of a factory with wire-cloth during the season of jam making.

G. S. (Staffordshire).—Uniting Bees.—The two stocks of bees in question would be of no use whatever to the stock to which you joined them. In fact, drones are less than worthless in a honey-producing apiary at this season. It is also more than probable that it is not a laying worker, but an unmated queen, that is the egg-producer in this case.

W. Roberts (Sussex).—Hives in Competitions at Shows.—The annual show of the Surrey B.K.A. will be held at the Crystal Palace on September 20, 21, and 22, and there are (see "Shows to Come") open classes for single hives.

Beginner (Birmingham).—We cannot say anything about the bees you describe as "whitey in colour," and say if they are diseased, unless we had a few for inspection.

"Bingo" (Colchester).—Bee Story.—It would serve no useful purpose to print an extract from a serial story such as you are good enough to write out for the B.B.J. The author is evidently not a bee-keeper, and draws largely on the imagination for his statements.

W. J. W. (Britford).—Vicious Bees.—We should put up with the trouble caused by the irascible character of the bees till the present honey-flow ends; then re-queen, as proposed.

J. H. B. (Lincoln).—Re-Queening and Uniting Bees.—1. You should be quite certain that the "very strong stock" has not re-queened itself during the three years the present mother bee is supposed to have been at its head. We say this because bees do at times depose their queens when getting worn out. If the point is fixed beyond doubt, we should prefer the orthodox method of uniting the strong stock and the "cast" (headed by a 1906 queen) by removing first the old queen, then, after dusting both lots of bees well with flour, joining both lots by removing half the combs from each, and alternating the frames in one hive. If this is neatly done the bees will unite without any fighting.

"Shellan" (Isle of Man).—Queen Mating.—One of the drones sent shows physical signs of having mated with a queen, but in the other two the indications are different, and probably have been caused through excitement.

A. J. W. (Stevenage).—Lantern Slides for Use in Lecturing on Bees.—These may be hired from the B.B.K.A., on application to Mr. E. H. Young, Secretary, 12, Hanover Square, London, W.

Suspected Combs.

H. Rowswell (Dorset).—The dark stuff in the cell sent is probably the remains of a queen larva, which, from some reason, has died in the cell while surrounded with royal jelly. In the crushed condition of queen-cell when received we can offer no other explanation.

F. Arthur (Rhyl).—The "dark stuff-" in some cells of newly-built comb is simply fresh-gathered pollen.

L. Keyser (Winchester).—The comb sent shows a clear case of "black brood." We hope to deal with the disease so-named in the course of a week or two. The "scare" in the Isle of Wight is caused by quite another and different bee disease, viz., "bee paralysis."

*** *Some Letters, Queries and Replies, &c., are unavoidably held over till next week.*

Special Prepaid Advertisements.

Twelve words and under Sixpence: for every additional Three words or under, One Penny.

SPARE VIGOROUS QUEENS, laying, 2s. 6d. each. A. J. BUTLER, F.R.H.S., Westville, Scotter, Lincoln. R 38

G. C. BURGESS, Rose Cottage Apiary, Wenden, Saffron Walden, Essex, has for sale 1906 Cockerels, White Leghorns, grand laying strain; Indian Game, Golden Wyandottes, etc., Pullets and Cockerels; also honey, tomatoes, and new potatoes. (Stamp.) R 56

EXTRACTOR, "THE LITTLE WONDER," in perfect order. 8s.—PLANT, Forge Mills, near Middlewich. R 53

STRONG STOCK, in frame hive, covering ten frames (wired), two section racks, 50 sections, dividers, excluder and lift, on rail, 23s.; one ditto, etc., on nine frames, 20s.—W. PARIS, Ringmer, Lewes. R 53

HANDSOME OBSERVATORY HIVE, fitted with feeding stage, double-glass both sides, brown leather shoulder strap and buckle; takes one standard frame and three sections; splendid attraction at bee or flower shows; each side has small ornamental perforated zinc for ventilation; will take 21s.; no exchange.—W. PARIS, Ringmer, Lewes. R 54

DRIVEN BEES; large supply; strong, healthy lots, with Queen, 5s.; also laying 1906 Queens, 2s. 6d. —T. BRADFORD, Expert, 38, Droitwich Road, Worcester.

TWO EXCELLENT 1906 QUEENS, 4s. each (in introducing cage).—APIARY, 3, Maitland Park Road, N.W. R 51

THREE-FRAME NUCLEI, 1906 LAYING QUEENS, 10s. cash.—HEMMING BROS., Standlake, Witney. R 50

HEALTHY DRIVEN BEES in August; also STOCKS on Frames, with or without hives.—Apply G. BOGGIS, Stockton, Bungay. R 49

WANTED, a few cwts. LIGHT HONEY.—Sample and lowest price to SHACKLETON, Thorner, near Leeds. R 48

THREE-FRAME NUCLEI, with Laying QUEENS, one year old, 10s. 6d.—A. J. BUTLER, F.R.H.S., Westville, Scotter, Lincoln. R 47

WANTED, a few cwt. good LIGHT COLOURED HONEY, 28lb. tins.—Offers to "A.," B.B.J. office. R 46

HONEY EXTRACTOR, 19s. 6d., cost 25s.; large WAX EXTRACTOR, 8s. 6d., cost 12s. 6d.; both new.—HEWETT, Laburnum Apiary, Alton, Hants.

SINGLE FRAME OBSERVATORY HIVE, with space for sections over.—HEWETT, Laburnum Apiary, Alton, Hants. R 45

28 LB. HONEY TINS (lever lids), 4s. per dozen.—FORD, Dunstall Road, Wolverhampton. R 44

HONEY-COMB FOUNDATION.—Efficient machinery and system for production of foundation; capacity, 5 tons per week by one mechanic, and about three youths to assist; One thousand pounds cash and percentage on output, will purchase complete outfit.—H. E. HALL, 14, Park Street, London, W. R 43

FOR SALE, BELGIAN HARES. Offers wanted for buck and doe, and seven young ones (6 weeks old); winners of 1st prize Wallingford and Reading. —LONGHURST, Cottage Homes, Wallingford. R 42

FOR SALE, beautifully marked SPANIEL DOG, well bred and broken; good appearance; 25s., or offers; must sell. Approval; Deposit.—TALLMAN, Kingston, Kingsbridge, Devon. R 41

FINEST ENGLISH HONEY, 15s. per 28lb. tin; sample, 2d.—DUTTON, Terling, Essex. R 40

HEALTHY DRIVEN BEES, 4s. per lot, cash; delivery in August. Orders in rotation. Boxes returnable.—H. KEMP, Frome, Somerset. R 39

WANTED, HONEY in exchange for fowls.—CHAS. HOWES, Fishponds, Bristol. R 37

STOCKS on three frames, 10s. 6d.; ditto on four, 11s. 6d.; 1906 fertile Queens.—W. Woods, Normandy, Guildford.

HONEY EXTRACTOR.—Abbott's "LITTLE WONDER," good as new, price 5s.—Court, Wilgate, Herne Bay Road, Whitstable, Kent. R 57

FOR SALE.—STRONG NATURAL SWARMS, securely packed, 12s. 6d.—LINSTEAD, North Lopham, Thetford. R 3

NEW LIGHT SCOTCH CLOVER HONEY, £3 cwt.; sample 3d. Deposit.—GILBERTSON, 43, High Street, Annan, Dumfriesshire. R 23

WANTED, 1-lb. SECTIONS NEW HONEY.—Price and particulars to T. G. TICKLER, Pasture Street, Grimsby.

QUEENS, specially selected from honey-gathering stocks; fertile Black English, 1906, in introducing cage, 2s. 6d., free, by return post; LIGHT EXTRACTED HONEY, 52s. 6d. cwt.; in screw-cap jars, 8s. dozen, sample 2d.; HONEY TINS (new), extra strong, no leaking, air-tight lids, 8s. 6d. dozen, 30lbs. capacity; COMBS BROOD, suit driven bees, healthy, 7d. each.—CHARTER, Tattingstone, Ipswich. R 21

HEALTHY DRIVEN BEES WANTED, in four, six or eight-pound lots, first and second week in August. Will give 1s. per pound, provide travelling boxes, and pay carriage. Cash by return post after receipt of bees.—J. BALDBRA, East Parade, Alnwick. R 24

SECTION GLAZING.—Best quality lace paper, made especially for bee-keepers' use; 100, in white pink, green, or blue, 6d., 300 1s. 4d., 500 2s. 2d., 1,000 3s. 9d., post free; lace one side, lace bands (lace both sides), white 2⅛, 3 and 3¼ wide, 100 1s. 2d., 200 2s. 3d., 500 4s.; a few in pink and blue, 100 1s. 4d., 200 2s. 6d., post free.—W. WOODLEY, Beedon, Newbury. R 27

DRIVEN BEES, with Queens, commencing August; 3s. 6d. per lot, cash with order; boxes returned; orders in rotation.—T. PULLEN, Ramsbury, Hungerford. R 11

HEALTHY DRIVEN BEES, commencing August; delivery to August 20, 4s. per lot; after this date, 3s. 6d.; orders cash; delivered rotation; boxes returnable.—H. C. SMITH, The Apiary, Woodmancote, near Cirencester. R 10

1800 lbs. SPLENDID NEW WHITE CLOVER HONEY, £3 per cwt.; sample, 2d.; in 28lb. tins, same rate.—ALBERT COE, Apiary Hall, Ridgewell, Halstead, Essex. R 18

READY for Delivery, healthy FERTILE QUEENS (1906), 3s. 6d., in introducing cages, post free.—CARBINES, Bee Expert, Cardinham, near Bodmin, Cornwall. Q 95

STING PROOF GLOVES, 2s.; with sleeves, 2s. 6d., post free. Why pay more?—KENT, Manufacturer, Dorchester Q 93

IN one of the prettiest villages in East Devon, on a Bee farm; FURNISHED APARTMENTS.—SOUTHCOTT, Gittisham Apiary, Honiton. Q 73

HOLIDAYS.—Cornwall; delightful situation near sea and Land's End; 30s. — S. HARBORNE, Apiary, St. Buryan, R.S.O. Q 69

QUEENS (celebrated Doolittle strain of Improved Italians).—A customer writes: "The virgin I had from you last year has done splendidly. Stock now on 33 Standard Frames." Virgins, 1s. 6d.; Fertiles, 5s. Safe delivery guaranteed. First come, first served.—DAVID TAYLOR, Ilminster. Q 64

WANTED, SECTIONS, first quality; prompt cash; also extracted per cwts.—W. CHILTON, Brookside, Polegate, Sussex.

NEW SECTIONS, HONEYCOMB.—Supplies wanted, at once.—SMITH, Cambridge Street, Hyde Park. Q 29

COMFORTABLE APARTMENTS for Brother Bee-keepers visiting Douglas. Terms: Tea, bed, and breakfast, 3s. 6d; or full board, 5s. per day.—MORSLEY's, Merridale House, top of Castle Drive, Douglas, Isle of Man.

Editorial, Notices, &c.

GLAMORGAN B.K.A.

ANNUAL SHOW.

The annual show was held July 25 and 26, in connection with that of the Cardiff and County Horticultural Society, at the Sophia Gardens, Cardiff. The perfect weather caused crowds of people to witness a record display of bee-produce. The competition was close in the members' classes, but in the open classes it was very trying to the judges. The extracted honey was of exceedingly fine quality. As a matter of fact, the exhibits in most classes were worthy of prizes. The Rev. W. H. A. Walters, Haverfordwest, and Mr. Samuel Jordan, Bristol, made the following awards:—

MEMBERS' CLASSES.

Twelve 1-*lb. Sections* (7 entries).—1st, R. Morgan, Cowbridge; 2nd, D. George, Merthyr-mawr, Bridgend; 3rd, W. H. Williams, Llangan.

Six 1-*lb. Sections* (12 entries).—1st, J. Boyes, Cardiff; 2nd, D. George; reserve, G. H. Mitchell, Llanishen; h.c., R. J. Edwards, Lisvane.

Three Shallow-frames for Extracting (6 entries).—1st, R. Morgan; 2nd, J. Boyes; 3rd, C. Spiller, S. Fagans; c., T. W. Roberts, Penarth.

Twelve 1-*lb. Jars* (*Light*) *Extracted Honey* (7 entries).—1st, W. H. Williams; 2nd, R. Morgan; 3rd, J. Boyes; reserve, Freeman Gravil, Cardiff; v.h.c., John Rees, Lisvane.

Six 1-*lb. Jars* (*Light*) *Extracted Honey* (10 entries).—1st, T. W. Roberts; 2nd, R. Morgan; reserve, W. H. Williams; v.h.c., D. George.

Twelve 1-*lb. Jars* (*Medium or Dark*) *Extracted Honey* (8 entries).—1st, J. Boyes; 2nd, G. P. Workman, Llanishen; 3rd, R. Morgan.

Six 1-*lb. Jars* (*Medium or Dark*) *Extracted Honey* (12 entries).—1st, D. George; 2nd, J. Boyes; v.h.c., R. Morgan; h.c., G. P. Workman.

Beeswax (*not less than* 1 *lb.*) *in Retail Form* (6 entries).—1st, R. Morgan; 2nd, D. George.

Articles of Food containing Honey (9 entries).—1st, D. George; 2nd, R. Morgan; 3rd, John Rees.

Complete Frame-hive.—No award.

Six 1-*lb. Jars Extracted Honey* (*Novices*) (3 entries).—1st, J. Kitt, Wenvoe; 2nd, T. W. Roberts; h.c., T. Richards, Whitchurch.

OPEN CLASSES.

Twelve 1-*lb. Sections* (11 entries).—1st, C. W. Dyer, Compton Crossing, Newbury; 2nd, E. C. R. White, Newton Toney, Salisbury; 3rd, D. George; reserve, F. C. Pullin, Warminster; v.h.c., C. Lodge, Chelmsford.

Twelve 1-*lb. Jars* (*Light*) *Extracted Honey* (13 entries).—1st, C. W. Dyer; 2nd, W. H. Williams; 3rd, E. C. R. White; reserve, D. George; v.h.c., C. Lodge.

Beeswax (*not less than* 2 *lb.*) *in Retail Form* (8 entries).—1st, C. Lodge; 2nd, E. C. R. White; 3rd, D. George.

Collection of Appliances (3 entries).—1st, John Hibbert and Sons, Cardiff; 2nd, E. J. Burtt, Gloucester, and Brown and Sons, Bristol (bracketed equal).

Observatory Hive with Bees and Queen.—1st, T. W. Roberts.

Mr. W. T. Watkin Lewis, J.P., kindly lent an observatory hive, showing brood supered with sections in various stages of construction.

Mr. Stevens, of the "Dorothy" Restaurant, Cardiff, again generously sent two large cakes sweetened with honey, to be distributed among the visitors.

At intervals each day demonstrations with bees were given in the new bee-tent by the Rev. H. Morgan before the usual eager crowds.—WILLIAM RICHARDS, Hon. Sec., July 30.

SWARMS, ANCIENT AND MODERN.

By COLONEL H. J. O. WALKER.

Many are the odd places in which bees have swarmed and tried to establish themselves since the far-off day when, leaving their rocky homes and the primæval forest, they became associated with mankind. The appearance of swarms is often mentioned by the ancient Greek and Roman historians, and it is curious how much importance was attached to the movements of bees—to whom, indeed, a divine origin was attributed—and how sometimes good, and sometimes evil, omens were foreboded from them. Clustering on the standards of an army, or on a general's tent, they presaged victory or defeat, according to the interpretation of the soothsayers.

Herodotus, recording in the 3rd Book of his History the defeat of the Greeks and Cyprians by the troops of Darius, about 500 B.C., writes: "The Amathusians cut off the head of Onesilus because he had besieged their city, and taking it to Amathus placed it over the gates, where, when the head had hung for some time and become hollow, a swarm of bees entered and filled it with honey-comb. Upon which the Amathusians consulted the oracle, and were admonished that they should take down the head and inter it, and make yearly sacrifice to Onesilus as to a hero, and that if they did this their affairs would prosper. This was done ac-

cordingly, and the sacrifices continued up to my time." The incident will recall to mind the swarm mentioned in the Book of Judges as having taken possession of the carcase of the lion slain by Samson, the Israelitish champion, the carcase having doubtless been reduced to hide and bone by the action of animals and a scorching sun.

Cicero, the great Roman orator, in his 1st Book on Divination, quoting Philistus, a historian of Syracuse about 400 B.C., tells a tale of swarming that will make a serious call on the believing powers of the modern bee-keeper. When Dionysius the Elder, afterwards ruler of Sicily, was marching through the island, he urged his horse into a river, where it was carried away by the torrent. Failing, in spite of great efforts, to get it out, he was walking on despondently when "suddenly he heard a neighing, and looking back he was glad to see his horse coming along quite lively, with a swarm of bees hanging to its mane. Of such importance was this omen that a day later he had begun to reign."

It was a tradition that in their infancy Plato, Pindar, Virgil, and other men of eloquence had been visited by bees which built honey-combs about them as they lay in their cradles. The same incident is said to have happened to St. Ambrose about 340 A.D., and according to another legend of the church, a swarm of bees accompanied St. Dominicus on his journey from England across the Irish Channel in the 6th century, A.D. A disciple of St. David, he had been learning bee-keeping with a view to the improvement of the craft in the sister island, and when he went on board a swarm accompanied him. Unwilling to deprive the hospitable brotherhood of such valuable prperty he returned to the Abbey, the bees going with him; but they would not be left behind, and in the end Father Dominicus took with him the swarm, to found, with St. David's blessing, prosperous colonies in the Comitatus of Dublin, at a place still known in the days of the 17th Century Chronicler as *Ecclesia Apiarii*, otherwise Lann-beachaire, the Bee-master's Church.

There is no reason to doubt the thrilling episode related by the Rev. John Thorley in his "Melissologia, or the Female Monarchy, London, 1744, how the bees gathered on the head and shoulders of his maidservant, Anne Herbert, and how she stood it out bravely until the queens had been caught and the swarm drawn away from her. Had it happened in these days we might have hoped for a snapshot photograph in the B.B.J. where so many swarming vagaries have found a record. As for instance on page 302 of Vol. XXX, where, as sometimes happens, a swarm has reverted to original principles and built combs under a ledge. It may be noted that in 1826 two French bee-keepers, J. and A. Martin, wrote a treatise in favour of open-air treatment, *Les Ruches à l'air libre*, Paris. The combs were to have a removable canvas case for winter and spring.

His Majesty's mails have before now been held up by a swarm of bees having taken a fancy to a pillar-box and gone in through the slit, and a few days ago it was reported that one had entered a dog kennel to the discomfiture of the rightful owner. In my own experience, the most curious choice of a dwelling has been a rabbit hole in the bank of a plantation. The poor bees were smoked out with sulphur before I had heard of it, but a part of the combs they had built was still visible in the opened burrow.

Quite recently I heard, from a lady who has started bee-keeping not far from where I live, that a swarm had left its hiving skep and taken refuge in a railway lamp-post, where it seems scouts had been observed on the previous evening by the station-master. When my friend arrived on the scene, most of the bees had withdrawn into the hollow of the post, and it is much to her credit that, by dint of digging under the post and smoking, they were successfully hived in the course of an hour or two.

The moral of my story of swarms is an old one:—"Bees do nothing invariably." If rightly considered, this is their greatest charm.

Leeford, Budleigh-Salterton, July 12th.

Correspondence.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper We do not undertake to return rejected communications.

NOTES BY THE WAY.

[6380.] Since my last "notes" were written, the wish I expressed therein for a week's sunshine, coupled with a high temperature, has not only been fulfilled, but it has started my good stocks booming, and has also brought the bees clustering outside the hives in large numbers. A neighbour informed me the other evening that his strong hives had a gallon of bees hanging outside his hives every night, and that they were making honey fast! Another bee-keeper told me he had cleared all his hives of their honey, as bees in his district never stored after "Swithins"—i.e., mid

July. Well, I am thankful to say my bees have been storing honey fast, early and late, and racks of sections put under the others on July 19 are nearly completed. This is from various sources, such as limes, white clover, blackberry, and a field of buckwheat near by. This is my first experience of the last-named plant. I was afraid the colour would be too dark, but the blend makes a very palatable honey, about the colour of that from the vetch, but of a better consistency.

This grand spell of fine weather has turned our wail into a pæan of thanksgiving, and will also put our stocks into good condition for winter by insuring good supplies of stores, thus saving the work and expense of feeding.

Wasps.—These pests are more numerous about here than they have been for the past two or three seasons. The nests, when found, are easily destroyed by placing a piece of cyanide of potassium at the entrance to nest. Place it just so that the wasps pass over the lump either in going in or coming out of their nest, and everyone passing over will die.

Driven Bees.—The season is now close on us when driven bees will be coming to hand, some to strengthen established stocks for winter, and some to build up stocks that are weak from some cause. In the first instance, it is advisable to give a comb of brood where such is available (or two if they can be spared), then five or six full sheets of foundation, and feed rapidly every night, as much as is required, to carry them through the coming winter. One strong lot will do fairly well; but two lots united will, under equal treatment, form a more satisfactory colony in the autumn, and be likely to do better the following spring. When building up or strengthening colonies by uniting, use flour as a pacifier; first remove the old queen, then flour both lots of bees till they are like dusty millers, and by spacing the combs in body-box a little further apart than usual in the latter, the bees can be shaken over the frames; then spread a slightly carbolised cloth over them, and they will be down out of the way at once, and the quilts can then be put in place and all made comfortable. Give the bees a little syrup for a few nights to start the queen breeding.

Supering.—In nearly every instance during my bee-keeping experience I have, in giving additional storage room, placed the second super under the first, and, when a third is needed, it goes under the second, and the first comes off. This is my invariable practice. My hives are just made to take two racks, with plenty of wraps beneath each roof. I always wrap up the sections warmly, and am still simple enough to believe that by so doing I am securing better-finished sections than if I used a simple square of carpet only as a covering. I have seen some bee-keepers work with top of hive wedged up to allow draught. I do not want draughts. If there are such my bees persist in filling up every crevice with propolis, so evidently they do not want cold or draughty supers. —W. Woodley, Beedon, Newbury.

INSURANCE FOR BEE-KEEPERS.

BUYING AND SELLING HONEY.

[6381.] I am glad to see that the question of the time to renew the insurance policies is being raised. I endeavoured to do this last year, but, there being no response, concluded that the craft generally were satisfied. I still adhere to the month of May as the most suitable time to date policies from, there being many removals at Lady Day, which in our county of Lincolnshire is April 6. The new home is then known; and any who, like myself, takes their bees from home for the season, are unable to say with any amount of certainty before that month where they are likely to be located. Each year I have bees at places not named in the policy, and none at some of the places named therein, which exposed me to risks that, if time of removal was May, I should be able to avoid, because I should by then have discovered the "pastures new," and settled the location. Is it neccessary to have one date for the whole of the country? Could not each county association settle its own time as most suitable to its members? I ask these questions, as I can quite see that our little friends will be all astir in the sunny south before their friends in the north have awakened their owners to insure. Therefore, I again name May as the intermediate and most suitable time for north, south, and the shires.

While writing, I should like to point out to our appliance-makers the great need to make provision for the removal of stocks by so adapting the front of hive that ventilation can be safely given with little trouble. Instead of doing this, the opposite appears to be the general rule. I bought seventy stocks this spring, and had to work like a slave for two days to get them ready for removal. On the other hand, an equal number of my own hives could have been got ready in less than two hours. A piece of wood nailed across front, with entrance cut in $\frac{7}{8}$ by $8\frac{1}{2}$ with a saw-cut through top, through which a piece of perforated zinc is slipped, one side with a piece nicked out for one bee only to pass at a time, and which can be reversed for removal, makes the

operation the work of a moment only, and is ample for all seasons and requirements.

I note that there is a tendency on the part of large buyers to run the price of honey down this season, one firm that uses your advertising columns, boasting that they can get all they want at 5d. per lb. Bee-keepers who accept such prices are acting most unwisely; every bee-man should make it a rule to fix a fair price on his produce, and not allow the buyer to be seller also. The producer should consider the craft generally, and keep at bay the sharks—as I may term all firms who are securing all they can at such prices. They list it wholesale at 9s. 6d. per dozen 1-lb. jars, and, supposing their expenses of bottling, etc., 2½d. per lb., this leaves them a clear 2d. per lb., which is 1d. too much. Remember, friends of the craft, no firm could buy at this price unless the seller is willing to accept it.—F. W. S., Lincs.

A SWARMING INCIDENT.

[6382.] I shall be obliged if I may describe a swarming incident which I encountered yesterday, and have the benefit of your opinion regarding it. I have six stocks and six nucleus hives in which young queens are being reared. Of the six parent stocks, four had swarmed prior to June 29, and two have not yet done so, as far as I can ascertain. When the swarm was discovered yesterday, I concluded that it was probably from one of the two hives that had not previously swarmed, and, wanting to keep these two as strong as possible, I decided to cut out the queen-cells and to return the swarm; but on examining first one and then the other of these two hives, I could find no signs of a swarm having left either of them. Each was busily working, with what I took to be the usual number of bees in it, and there were no queen-cells, nor traces of any having been in the hives this year. Of the other four stocks, the last to swarm did so on June 28, and, as I know from having examined the frames a few days later, one young queen was hatched and the rest of the queen-cells destroyed. Knowing this, I paid no particular attention to this hive at the time, except to see whether the bees were showing any signs of excitement at the entrance. They appeared to me to be working just as usual, but later on in the day I examined the frames and found a queen-cell which, from the roughness of its edge and general newness of appearance, I felt had probably contained a young queen a few hours before. I will call this hive No. 1.

Before making the examination of the frames of No. 1, as just described, I noticed signs of great excitement round the entrance of another hive, which I will call No. 2. Numbers of drones and workers were hovering round it. As none of the other hives showed any signs of excitement, I concluded that the swarm must have come from this one, although it contained a swarm, headed by a Carniolan queen of last year, that had left the parent hive on June 4. On examining the brood-frames, I found five queen-cells of which four were closed, and came to the conclusion that this was the hive I was looking for. I then cut out the queen-cells and proceeded to put the swarm back by letting the bees run up a sheet placed at the entrance. As soon as I did this a terrible battle began, and soon hundreds of bees were dead at the entrance. The swarm had clustered on two branches and, fortunately, my gardener, who was helping me, had an accident with the second branch and dropped it, which saved this half of the bees from being made to join in the struggle. These bees, after being dropped, rose and eventually clustered again on the first branch, which I had thrown into some long grass. Knowing, from the battle going on, that I must have chosen the wrong hive to return the bees to, I put a hive body over those now on the branch and in the grass, and almost all went up into it, which made me feel that the queen was probably with them.

At 9 p.m. I went back with my gardener to put this hive on to a stand, and I then noticed that a little cluster of bees, about as large as a tennis-ball, had formed on the branch. As some of them were running about in a very unsettled manner, I thought that the queen could not be with them and I decided to shake these few at the entrance of No 1, as I had by this time discovered the empty queen-cell in the latter and suspected that it, after all, must be the hive I wanted. They ran in without any notice being taken of them, but, unfortunately, the queen was with them, and she also got in before I could capture her.

Feeling pretty certain, now, that this was the hive I had been looking for, and knowing that there was no queen with the bees I had hived earlier in the day, I placed their hive with the entrance facing that of No. 1, into which the queen had gone, and close to it.

This morning, I found a dead queen outside No. 1, and the hive opposite to it empty. There are a few dead workers between the two hives, but not so many as to lead one to think that any fighting had taken place, except between the two queens. I enclose the dead queen and half-a-dozen workers who were alive and standing round her when I found her.

Having stated my case I will be glad of your opinion on the following points:—

(1) Can you say if the insect sent is a

fertile queen, and, therefore, the one that went away with the swarm; or the young queen that must have hatched out almost immediately after the swarm left the parent hive? (2) Is it probable that the bees of the swarm will have gone back into the parent hive, No. 1, which is opposite to it? (3) Is it not unusual for a young queen to hatch out so soon after the swarm has left? (4) Is it not unusual for a hive to send off a "cast" so long as 23 days after the first swarm issued? (5) Is it not unusual for a swarm, even of Carniolans, to raise a lot of queens and be ready to swarm again within 47 days, as in hive No. 2? I was under the impression that a swarm need never be suspected of swarming again the same year. These Carniolans have done almost no work in their super, having only filled three sections.

I know Carniolans are notorious for swarming, but I had no idea that they are so bad in this respect as mine appear to be. The queen in No. 2 is the first of this breed that I have had, and I feel disinclined to have any more to do with any of her kind. When she went away with her swarm on June 4, I took 6 frames out of the parent hive, to form 2 nuclei, and left only 4 frames in it. In spite of this the parent hive sent off a cast on June 18, so, if I had not yesterday destroyed the queens which were being reared by the first swarm, I should probably have had a sixth lot this season from the one parent hive. I feel that I had probably better examine the nuclei to see if they are also rearing queens. Such prolific bees would be splendid if their swarming propensities could be kept down, but I feel that this is impossible unless one is prepared to hunt for queen-cells about once a week.

I forgot to mention that hives No. 1 and 2 had plenty of room in the supers, though No. 1 was getting rather crowded until I put in a second rack of shallow-frames about ten days ago.

Please excuse this terribly long letter. I enclose my card, and sign myself—E. L., Perthshire, July 22.

[Queen shows no trace of Carniolan marking—seems just a common brown queen. Bees are very slightly marked, but not so light as most pure Carniolans.—EDS.]

"SELECTED QUERIES."

[6383.]—In the "years ago" of our journal we sometimes had a most useful "selected query," which brought valuable answers from the leaders of our craft. On November 24, 1887, for instance, was the following: "Which is the best, cheapest, and quickest way of getting a quantity of combs built out for use in extracting? Should starters be given, or full sheets of foundation?" with replies from Messrs. W. B. Webster, Wm. McNally, W. Carr, E. Simmins, G. J. Buller, J. H. Howard, W. Woodley, and that Nestor of bee-keeping, the delightfully scholarly and practically inventive Rev. George Raynor. I have one of his hives still in use, and it would delight his spirit to see the three crates of shallow-frames filled with beautiful honey which I am taking from that hive, which he himself once used.

Could the old plan be revived? Another generation has arisen, and methods have vastly improved in twenty years. I would suggest that a useful "selected query" at this season would be: "What is the best way of getting frames from which the honey has been extracted cleaned up by the bees before putting them away for next season?" We might get some good "wrinkles" from some of our friends. We are all friends in "Our Journal."—A. ARTHUR HEADLEY, The Rectory, Alresford, Hants, July 23.

GLASS COVERS.

[6384.]—For the last six months I have been considering the utility of glass covers, and how they should be made.

I have also carefully studied all that has been published in the B B.J. on this subject, and, since others of your readers may be interested in this, I venture to send you the details of the glass covers I am making. I make a flat picture-frame, $\frac{3}{8}$ in. in thickness, $1\frac{1}{2}$ in. wide, and $17\frac{1}{2}$ in. by 16 in. outside measurement. Upon this frame I place a sheet of glass not less than $\frac{1}{8}$ in. thick, and $16\frac{1}{2}$ in. by $15\frac{1}{2}$ in., with a round hole cut at its centre, not less than 2 in. in diameter. The bees will propolise the glass to the frame and the frame to the super, but the glass may be removed by passing a knife between it and the frame, or the frame with the glass propolised to it, may be detached by a knife between the frame and the super.

To cover the central hole, in non-feeding times, I use a strip of glass $15\frac{1}{2}$ in. long, and at least an inch wider than the diameter of the hole, or this might be a strip of wood—either would help the glass cover to support the wraps above it. But I am thinking of making the flat picture-frame out of wood $\frac{5}{8}$ in. thick, and the glass sheet $13\frac{1}{2}$ in. by 15 in. I shall sink into it, and fasten it to the frame, so as to leave a clear $\frac{3}{8}$ in. between the glass and the frames in the super below.—J. B. L., Loughborough.

DESTROYING BRACKEN.

[6385.] In reply to your correspondent "Apis" (3349, page 296), Pembroke, inquiring how to get rid of bracken, I may state that no known solution will have

any permanent effect on them. If, however, they are cut four or five times a year, while in a sappy state, before the leaf unfolds, they bleed freely, and eventually die. Cutting after this stage has practically no effect.—A BEEKEEPER, Dumfriesshire, July 27.

A CURIOUS QUEEN-RAISING INCIDENT.

[6386.] On July 11 I made an artificial swarm by removing a large stock to another part of garden, allowing all flying bees to go into a prepared hive placed on the old stand filled with five sheets of foundation and one comb of sealed brood, but no queen, as the stock was too large and vicious for me to handle them. On the 18th I took a fertile queen, intending to introduce her to the new stock, but owing to a slight slip in handling, she dropped among bees, and was almost instantly killed! Having some virgin queens in course of mating, nothing was done until last evening (July 25), when on proceeding to the hive in order to insert a ripe queen-cell, I found on one of the combs of newly drawn-out foundation (and just about being sealed over), a finely developed queen-cell, with royal jelly and living larvæ inside. I am wondering if any of your readers have ever seen or heard of a similar case?—APIS-AMATEUR, Bristol.

CAPPINGS OF COMB.

By "L. S. C.," Ilkley, Yorks.

The Latest Bee Scare (*p.* 281). — One is sorry to see that further reference to this subject has been crowded out. Some of us must write a little less in future! If this is bee-paralysis proper, there is no need to be over-alarmed. The disease is well known in the United States, and efficient treatment appears to have been discovered. We do not want it to spread, however, whether new or not; and, if the facts are not exaggerated, our good friends in the Isle of Wight are urged to stamp it out for the good of the craft *without delay*. We should like to know not only how much truth there is in the report, but what steps have been taken to overcome the disease, and the result. Also, very particularly, where the disease first obtained a footing, and *from what source*.

The Missionary Cause (*p.* 281).—It is a sin to undersell the ordinary producer for this or any other philanthropic cause. Indeed, honey sold for such purposes should, one would think, easily command more than market prices. See to it, Utopian friends, that your gifts are not paid for by those who can ill afford to do so—your bee-keeping "neighbours" nearer home.

Bees Nibbling Foundation (*p.* 281).—It has been satisfactorily proved that sections near or over old brood-combs are capped darker than those over new combs, owing to the use of bits of second-hand wax. There is much to be said in favour of comb-honey production over starters only.

Is not "Queen Bee" (p. 281) mistaken in supposing his to be practically the only bees for a two-mile radius? Whether or not, it should be easily possible to trace the source of two large swarms of Golden Italians!

Why has "North Notts" (p. 283) decided against the combined use of sections and extracting-frames? Is there not an advantage in the use of these latter in a hanging section-rack?

"Amateur Bee-keeper" (p. 287) reminds me of the general misuse of this term when "novice" is intended. "Only an Amateur" is a common but mistaken reflection.

Third-class Experts (*p.* 291).—What a first-class crop, and 70 per cent. of them are ladies! May we extend to them the right-hand of fellowship?

Queen-rearers (*p.* 293).—An indictment of cheap queens is that of "D. M. M." The best queens will always command good prices, like any other kind of specially select stock. But the test of such must be primilarly the quantity and quality of the honey produced. *Temper* is an important point; but *beauty* is only skin deep, and the over-pursuit of this or any other secondary quality may lead us to disappointment at the bottom of an empty cell. Let us breed from the most consistently productive stock; and if hybridising bees will give us more and better honey, let us have hybrids by all means. But do not let us spoil the blacks in the process.

Hives on Scales (*p.* 294).—Some of the loss during the night is, of course, due to evaporation; but friend Stevens will have to be up even earlier than 6.30 if he wishes to see the first bees leave the hive these mornings! An hourly analysis for one night would be of interest; but it should not be difficult to arrange an automatic indicator for a short continuous record.

Swarming During Manipulation (*p.* 295).—I had this occur once when my disturbance allowed the release of a virgin queen which the bees had confined to the cell, and which they were feeding through a slit in the capping. This queen must have been ready for exit for at least a day, as otherwise she would have been unable to fly.

Head Swarm (*p.* 296).—A recent American publication had a very good photograph of one of these! The operator's hat

was covered by an evidently "prime" swarm. If this presented Mr. Hasty's informant, the swarm may have been "settling" with the other bee in his bonnet! Let us hope they came to correct "terms."

Queries and Replies.

[3371.] *Young Queens Cast Out of Swarmed Hive.*—Will you kindly let me know in next issue if the enclosed cells are two queen-cells and one drone-cell? They were taken off frames from which I had a strong swarm on 1st July. To-day, July 17, I found another swarm among my peas, and so I conclude the two swarms came from the same hive, as I had only one hive before. On examination of the hive to-day I found brood cepped over, and two queen-cells (somewhat similar to the enclosed) on one frame, seventeen days after the first swarm. There were no eggs or grubs in the hive. The bees are working well. Not finding any eggs in the hive, must I conclude there is no futile queen in the hive? Must I cut out one of the supposed queen-cells? Reply in your next issue will oblige.—A. LITHERLAND, Pemberton, July 17.

REPLY.—Queens have hatched out from two of the three cells, and it is more than probable that by the time these lines are in print the queen will be laying all right. The third cell is imperfectly formed, but was intended for a queen-cell. It is not uncommon for young queens to be a fortnight before they are mated and laying.

[3372.] *Bees and Heather Honey.*—Within two minutes' flight of my hives there are patches of heather, scattered here and there; and within a mile we have considerably more. Probably the first-named forage would not benefit my bees much, but the latter should. What I wish therefore to know is: 1. Should I in about a fortnight's time take off the shallow-frames now on the hives and replace them with sections? Or, is the heather too far away to expect much result? 2. When shallow-frames are returned to bees to clean up, I presume they should be removed again in a few days. Is this so? 3. Is it best to wait until frames are quite capped-over before removing from hives? 4. Will *one* lot of driven bees be sufficient for wintering if obtained by middle of August?

I should like to say how much I appreciate the B.B.J. The way some of your writers, wise men in the craft, are constantly seeking to interest and instruct beginners, appeals to me very much, every new thing discovered is quickly made known. It is not a question of "Can you keep a secret," all improvements, it seems to me, are given out to the bee world.—Beginner, Birmingham.

REPLY.—1. If the heather in question is the true "ling" *Calluna vulgaris*, it should be worth while to prepare for surplus-gathering from it, as proposed. 2. The wet frames will be cleaned up by the following morning if put on at nightfall. 3. Yes, much the best.—Much obliged for your kindly appreciation of B.B.J.

[3373.] *Bee-keeping and Fruit-growing.*—I am hoping to commence next season (in a small way) fruit-growing and bee-keeping. I have been doing something with bees since early in 1902, and now control the hives of one or two friends around. I have just obtained Mr. Cowan's "Honey Bee," and have also always had the "Guide-Book," and an older edition of Simmin's "Modern Bee Farm," and in view of my plans for the future, will you please say? 1. Do I need other works on bees for practical purposes? 2. Will you suggest a good book on fruit-growing, from strawberries and currants to orchard fruit? 3. Do some large bee-keepers give a few days' instruction (practical) to people needing such for moderate fees? Thanking you in anticipation of replies to above.—H. O. M., Bristol.

REPLY.—1. You might find the A B C of Bee Culture helpful, but, beyond that, no other books are needed for all practical purposes connected with the craft. 2. The only extensive bee-keeper we know of who is also a fruit-grower on a large scale is Mr. R. Brown, Flora Apiary, Somersham, Hunts. He might be willing to take a pupil.

[3374.] *Deposing Queens.*—The accompanying queen was thrown out of her hive recently, and I should be much obliged if you could inform me as to the cause of death? I may say the hive had not been touched for a week. On examining the combs I find a large number of unhatched eggs, so that she has been laying quite lately. I therefore ask: Will it be safe to allow the bees to rear a queen from these eggs, and to re-queen other hives with the resultant queens. It was my intention to rear other queens from the one mentioned above, as she was the best in my apiary. I should be much obliged for an early answer to this, as the queen-cells will soon be well underway.—"Apis." Pembroke.

REPLY.—Queen is a fine adult, and there is no sign of injury or damage to account for death. There is no reason why queens should not be reared from eggs left in the hive for requeening your other stocks with.

Bee Shows to Come.

A nominal charge of 2s. 6d. is made for notices (no exceeding 7 lines) in this column, 10 lines charged 3s. 6d., up to 15 lines 5s., which covers cost of insertion from order till date of show. Cash should accompany orders for insertion.

August 2, at Wallop, Hants.—Honey Show in connection with Wallop Horticultural Society will be held in the grounds of Wallop House by kind permission of Mrs. Ross. **Entries closed.**

August 6 (Bank Holiday) at Cambridge.—The Cambs and Isle of Ely Beekeepers' Association have arranged for a show of Honey, Wax, and Bee Appliances, at the Mammoth Show to be held in Cambridge on the above date. Liberal prizes are offered. Each class is open to all the world. The gift classes being presented to local charities. Schedules from the Hon Sec., G. E. Rogers, Beeholm, Cambridge. **Entries close July 30.**

August 6 (Bank Holiday), at Melton Constable Park. — Annual Show of the North

Norfolk B.K.A. Schedules from C. J. Cooke Edgefield, Melton Constable. **Entries close July 28.**

August 8 to 10, at Middlesbrough.—Show of Honey, etc., in connection with the Royal Yorkshire Agricultural Society. Schedules and form of entry from John Maughan, Secretary, Blake-street, York. **Entries closed.**

August 8, at Clevedon, Somerset, in connection with the Horticultural Show.—The Somerset B.K.A. will hold its first annual Honey Show as above. Several open classes. Schedules from Louis E. Snelgrove, Hon. Sec., Cromla, Locking Road, Weston-super-Mare **Entries close July 28.**

August 9, at Abingdon Park, Northampton. — Honey Show of the Northants B.K.A. Special prizes, including the Baroness Burdett Coutts' prize hive for cottager members, also three open classes, including one for single 1-lb. jar honey. (**Entry free.**) Prizes, 20s., 10s., 7s. 6d., and 2s. 6d. Schedules from R. Hefford. Hon. Sec., Kingsthorpe, Northants. **Entries close August 3.**

August 9, at Madresfield, Malvern. — Annual Show of the Worcestershire Bee-keepers' Association. Open class. Schedules from Mr. Geo. Richings, 2, Shrubbery Terrace, Worcester.

August 15, at Wye.—Kent Honey Show. Sixteen classes for Honey and Bee Products. Greatly increased cash prizes; Classes 1 to 11 open to Kent; Classes 12 to 16 open to the United Kingdom. Open classes include—Single 1-lb. jar light extracted honey; single 1-lb. jar dark ditto, 20s., 10s., 5s., in each class; 1-lb. section, silver cup. Trophy class First prize silver cup, value £3 3s. Best collection of Bee Appliances, first and second prizes. Special arrangements for Bee Demonstrations and many other new attractions added this year. Schedules on receipt of stamp from J. Tippen, Secretary, Wye, Ashford Kent. **Entries close August 10.**

August 16, at Yetminster, Dorset. — Annual Show of the Yetminster and District B.K.A. held in a field kindly lent by Mr. Jolliffe. Four open classes, including three 1-lb. jars extracted honey, three 1-lb. sections, and cake of beeswax. Schedules from G. Leeding, Hon. Sec., Bradford Abbas, Sherborne. **Entries close August 10.**

August 17. — In Public School, Portwilliam, Wigtownshire.—Honey Show in connection with the Horticultural Society. Classes for sections and extracted honey, open to amateurs and cottagers. Challenge class (open to all) for three 1-lb. jars extracted honey; prizes, 20s., 12s., 8s., and 4s.—Schedules from Secretary, Horticultural Society, Portwilliam, N.B.

August 18 at Borgue. N.B.—Honey and Flower Show, to be held at Borgue, Kirkcudbright, N.B. Open classes. Schedules from E. S. Munro, The Academy, Borgue, Kirkcudbright, N.B. **Entries close August 18.**

August 22 and 23, at Shrewsbury.—Annual Show of the Shropshire B.K.A. in connection with the Horticultural Society's Great Floral Fête in "The Quarry," Shrewsbury. Seven open classes for honey. Classes with free entry for single 1-lb. jar and single 1-lb. section. Schedules from S. Cartwright, Hon. Secretary, Shawbury, Shrewsbury. **Entries close August 10**

August 24, at Exeter.—Annual Show of the Devon B.K.A., in conjunction with the Devon and Exeter Horticultural Society. The Baroness Burdett-Coutts' prize, hive for the best exhibit shown by cottager members, Dr. Philpott's prize of £1 1s., for the two best sections of comb honey. All open classes. Schedules from the Hon. Sec., A. S. Parrish, Heavitree Road, Exeter. **Entries close August 18.**

August 25, at Barnton, Cheshire.—Honey Show in connection with Floral and Horticultural Exhibition, two country, and six local classes for honey and wax. Cheshire B.K.A. silver medal to winner of 1st prize for county honey. Schedules from F. Hindley, Hon. Sec., 28, Runcorn Road, Barnton, Northwich. **Entries close August 18**

August 29, at Chester.—Cheshire B.K.A. Show in connection with the County Agricultural Society. Open classes for Hives, Observatory Hives, Sections, and Extracted Honey. Baroness Burdett-Coutts' prize hive for best exhibit shown by cottager member. Seven classes for members. Schedules from T. A. Beckett, St. Werburgh Chambers, Chester. **Entries Close August 8,** or at double fees, **August 15.**

August 29, at Forbury Gardens, Reading.—Honey Show of the Berks. B.K.A. Schedules from the Hon. Sec., D W. Bishop-Ackerman, 161, King's Road, Reading. **Entries close August**

August 30, at Montgomery.—Honey Show in connection with Horticultural Exhibition. Two open classes for six 1-lb. sections and six 1-lb. jars extracted honey. Prizes, 10s., 5s., 2s. 6d. Entry fee, 1s. each class. Schedules from Mr. W. J. Jones, Secretary, Montgomery. **Entries close August 23.**

September 8, at Dumfries.—South of Scotland B.K.A. 14th Annual Show of Honey, Bees, and Appliances. Five open classes—viz., three 1-lb. jars, three 1-lb. sections, and for single jar and section (free entry), and cake of wax; also handsome money prizes and valuable medals, for members only. Schedules from Jas. Johnstone, Sec., Nelson Street, Maxwelltown. **Entries close September 1.**

September 12 and 13, at Edinburgh.—Thirteenth Annual Exhibition of Midlothian B.K.A. in Waverley Market. Open classes for six sections heather, six sections flower, six jars heather, six jars flower. Prizes, 15s., 10s., 5s. Entry, 2s. per class. Schedules from W. Weir, Heriot, Midlothian.

September 13, at Castle Douglas.—Honey Section, Dairy Show. Liberal prizes. Five open classes—viz., three 1-lb. jars, three 1-lb. sections, single jar, single section, and for cake of beeswax. Schedule from Jas. Johnstone, or from L. Aird, Hardgate Schoolhouse, Dalbeattie. **Entries close September 1.**

September 8 to 15, at the Agricultural Hall, London.—Honey Show in connection with the Confectioners', Bakers', and Allied Traders Annual Exhibition and Market. (See large advertisement on page i.) **Open to all British Bee-keepers.** Entry fee in each class one shilling. Schedules from H. S. Rogers, Secretary, Exhibition Offices, Palmerston House, Old Broad Street, London, E.C.

September 20, 21, and 22, at Crystal Palace.—Surrey B.K.A. Annual Exhibition of Bees, Honey, Wax, and Appliances, etc. Twenty-six classes (ten open to all). Increased prizes and medals. Schedules from F. B. White, secretary, Marden House, Redhill, Surrey. **Entries close September 7.**

September 22 to 29, at the Agricultural Hall, London.—Honey Show in connection with the Twelfth Annual Exhibition and Market of the Grocery and Kindred Trades. Nearly £50 in prizes for honey and beeswax including four prizes of £4, £3, £2, and £1, in honey trophy class. **Open to all British Bee-keepers.** Schedules from H. S. Rogers, Secretary, Exhibition Offices, Palmerston House, Old Broad Street, London E.C.

September 26, at Altrincham.—Show of Honey Products, in connection with Altrincham Agricultural Show. Open to United Kingdom: Classes for Hives, Observatory Hive, 12 Jars Extracted Honey. Open to County of Chester only: Classes for Trophy, Amateur-built Hive, Two Shallow Bars, 12 Jars Run, 12 Sections, Wax, etc. Special classes for cottagers. Special classes for Society's district. Liberal prizes. Low entrance fees. Schedules from Mr. J. H. Hall, 2, Dunham Road, Altrincham. **Entries close September 9.**

October 9 to 12, at the Agricultural Hall, London.—Show of Honey and Bee Produce in connection with the British Dairy Farmers' Association. Numerous and liberal prizes for honey, etc., including the valuable Silver Challenge Cup of the B.B.K.A. Schedules from Mr. Wm. C. Young, Secretary, 12, Hanover Square, London, W. **Entries close September 12.**

Notices to Correspondents & Inquirers.

Letters or queries asking for addresses of manufacturers or correspondents, or where appliances can be purchased, or replies giving such information, can only be inserted as advertisements. The space devoted to letters, queries, and replies is meant for the general good of bee-keepers, and not for advertisements. We wish our correspondents to bear in mind that, as is necessary for us to go to press in advance of the date of issue, queries cannot always be replied to in the issue immediately following the receipt of their communications.

"CONCRETE" (Workington).—1. When the larvæ in a queen cell is found in an abnormal position it goes to show that the frame of comb on which the cell is found, has been shaken roughly when handling. 2. Yes, it is best to have queens raised in strong stocks in order to avoid risk, the cells being abortive from lack of proper warmth during the hatching process. 3. The queen-raiser from whom you purchased the queens would be the best person to inquire from with regard to the death of queens, as he knows what kind of cage is best. Five days is too long to keep a virgin queen caged in the colony to which she is to be introduced. 4. You should procure Mr. Sladen's book on "Queen-Rearing in England." It gives all the details asked for on the subject.

Suspected Combs.

A. B. (Dunaskin).—Drone-comb containing dead larvæ is of no use in diagnosing. We should have worker brood in worker comb.

"ANXIOUS" (Glam.).—Sample of comb sent is a typical one showing a thoroughly bad case of foul brood needing drastic treatment.

N. X. J. (Staffs.).—There is foul brood in sample, but not in a bad form, indeed in some respect the dead larvæ somewhat resembles "pickled brood."

S. M. WATSON (Poole).—Sample No. 1 (two pieces: The newly-built bit of comb has dead brood in cells (not foul brood), but resembling "black brood," as known in the U.S.A. No. 2 (old black comb): Shows "F. B." in two or three cells only.

J. ROBERTS (Northop).—No disease in comb; stock is headed by a drone-breeding queen, and is therefore useless.

DOUBTFUL (Sheffield).—There is foul brood in both samples, but the disease is only starting in recently-built comb. The old piece is badly affected.

T. H. S. (Yorks.).—No foul brood in sample, in which only one batch of brood has been reared. The dead larvæ bears some resemblance to "pickled brood," but it may be "chilled" only.

E. M. M. (Chipping Norton).—Comb ((quite newly built) contains only honey and fresh pollen.

X. Y. (Banff).—Very bad case of foul brood: in fact, the dead larvæ in comb is rotten with disease. The whole contents of hive should be burnt.

Honey Samples.

W. G. H. (Newport, Mon.).—The honey is good in flavour and colour, but not dense enough for a keen competition; would do very well for a local show.

"IDEJA" (Gloucester). — The sample is good in flavour, but if in a 1lb. jar would be rather too "deep golden" in colour for a big show. It is also somewhat thin. Will do for local show.

E. H. P. (Gravesend).—Very good sample. Will do for any show bench.

J. B. (Salisbury).—Hardly good enough for showing; colour faulty, and honey not well ripened. The pamphlet you name is out of print, but we shall have a further supply in a short time.

A. D. (Mexborough).—Sample is very good in flavour, consistency, and colour; indeed is good on all points, and very suitable for the show bench.

DIANA (London, E.C.).—There is no honey dew in sample, its dark colour being due to the forage it was gathered from. It is hardly suitable for table use. The flavour is coarse and rank, while the aroma is unpleasant. It appears to be gathered mainly from privet.

Special Prepaid Advertisements

Twelve words and under Sixpence: for every additional Three words or under, One Penny.

HEALTHY Stocks in good Standard Hives, 20s. each.—JARVIN, Colefow, Glos. R 85

1906 SELECTED QUEENS, Woodley's strain, Guaranteed healthy and safe arrival, in safety introducing cages, 3s. 6d.; VIRGINS, 1s. 3d.—TOLLINGTON, Woodbine Apiary, Hathern, Loughboro'. R 84

FOR Sale, ten strong, healthy stocks of BEES in frame-hives; a number of boxes of shallow extracting combs, section racks, etc.; 3cwt. 1905 good LIGHT HONEY, in 28lb. tins.—PENFOLD, West Street, Epsom. R 83

FOR Sale, a quantity of HIVES, full of Bees and Honey, in healthy condition; also BEE APPLIANCES.—Apply to Mr. WALTER STEVENS, Bath Lane, Mansfield, Notts.

DRIVEN BEES, guaranteed healthy, with Queen, 3s. 6d.; ditto, specially selected, with 1906 fertile Queen, 4s. 6d. Extract from order just to hand:—"The bees I had from you last year have done splendidly."—W. SOLE, Certified Expert, Poplar Grove, New Malden, Surrey. R 82

TWO STOCKS OF BEES, three empty bar-frame hives, geared extractor, heather press, smoker, super clearer, good condition, 50s. the lot: owner going abroad.—PICKTHALL, Low Laithe, Bingley, Yorks.

WANTED, one or two driven lots or stocks of CARNIOLAN BEES.—F. MERCHANT, Amesbury, Wilts. R 79

FOR SALE, four dozen ACME BLOOM PROTECTORS; cost 36s., will take 18s.; or what offers in bees or bee appliances?—GIBSON, Newton Bewley, Stockton on Tees. R 78

QUEENS, choice fertile 1906, [illegible] many non-swarming stocks, 3s. each; [illegible] spatch.—TAYLOR, Hollyhurst, Boldmere [illegible] Wylde Green, near Birmingham. R 75

HONEY, finest quality, [illegible] lb.; [illegible] sample [illegible] H. MAY, Kingston, Wallingford. R 77

SEVERAL HUNDREDWEIGHTS FINEST NEW [illegible] EXTRACTED HONEY, [illegible] wt.—HILLING[illegible] R 76

Prepaid Advertisements (*Continued*).

HEALTHY DRIVEN BEES, with Queen, 5s. per lot; also 1906 Queens, 2s. 6d. each; boxes returnable; 10th season.—A. R. MORETON, Expert, Hallow, Worcester. R 74

"FLAG TO PRETORIA"; "AFTER PRETORIA"; 67 numbers, perfectly clean. Exchange for strong healthy driven bees, honey, good extractor, or sell 17s. Also about 200 Hobbies' designs, 3s., or offers.—FRY, Kerton Villa, Bury Lane, Horsell, Surrey. R 74

WANTED to exchange for healthy bees, eight prize-bred Black Minorcas hens, one year old; Smethurst and Haslam's strain.—J. HOWARTH, 31, Well Bank Street, Tottington, Bury, Lancs. R 73

MEADOWS, Syston.—Clearance sale of extractors, observatory, hives, etc. Prices on application. R 72

EXTRACTOR, "COWAN'S RAPID," wanted. Send lowest price; must be in thorough order.—WOOD, 67, Park Road, Crouch End. R 71

BUSINESS Wanted; baker's, grocer's, or both combined, within 20 miles of London. Must be a good sound business, and bear thorough investigation. Preference given to one in a good bee-keeping district.—"W. A.," B.B.J. Office. R 70

FOR SALE, two LIGURIAN 1906 QUEENS, 3s. each; DRIVEN BEES, two strong lots, English-Ligurian Hybrids, 4s. each; EXTRACTOR, Baldwin's "Little Wonder," new last year, 5s.—F. P. CHEESMAN, Sutton Valence, Kent. R 69

WANTED, small OBSERVATORY HIVE, cash, or exchange Taylor's Non-Swarming Hive.—PARK, Dempster Street, Greenock. R 68

TWO or three QUEENS to spare, 2s. each; second-hand hive, 5s.—STEVENS, Churchill, Oxfordshire. R 66

WANTED, PRACTICAL GARDENER, with good experience of bee-keeping.—Reply by letter, stating age, wage, also send references, to SAMMONS BROS., Walsall. R 65

TEN GOOD SKEPS of BEES, healthy, strong, well provisioned, 10s. 6d. each.—POSTMASTER, Haconby, Bourne. R 64

OBSERVATORY HIVE FOR SALE, Lee's make; holds three frames and sections; Bryce feeder; double glass sides; revolves on solid stand; in perfect condition, £2 7s. 6d.; free on rail.—OLIVER G. PIKE, Winchmore Hill, Middlesex. R 63

WORKING OBSERVATORY HIVE, takes two standard frames and four sections (revolving), all mahogany, £1; exchange honey, bees, or appliances.—WAKERELL ,21, Mansfield Road, Croydon. R 62

KODAK NO. 2 FOLDING POCKET CAMERA; sacrifice 25s.—MARTIN, Bee-keeper, Wokingham. R 60

IMPORTED ITALIAN QUEENS, 6s. 6d.; home-raised Italian and Carniolan, 5s.; British, 4s.; swarms —Nuclei or full Colonies. Fair prices.—E. WOODHAM, Clavering, Newport, Essex. R 59

DRIVEN BEES wanted; any quantity.—E. H. TAYLOR, Welwyn, Herts. R 61

THREE-FRAME NUCLEI, 1906 LAYING QUEENS, 10s. cash.—HEMMING BROS., Standlake, Witney. R 50

WANTED, a few cwts. LIGHT HONEY.—Sample and lowest price to SHACKLETON, Thorner, near Leeds. R 48

SINGLE FRAME OBSERVATORY HIVE, with space for sections over.—HEWETT, Laburnum Apiary, Alton, Hants. R 45

HONEY-COMB FOUNDATION.—Efficient machinery and system for production of foundation; capacity, 5 tons per week by one mechanic, and about three youths to assist; One thousand pounds cash and percentage on output, will purchase complete outfit.—H. E. HALL, 14, Park Street, London, N. R 43

DRIVEN BEES; large supply; strong, healthy lots, with Queen, 5s.; also laying 1906 Queens, 2s. 6d. —T. BRADFORD, Expert, 68, Droitwich Road, Worcester.

FINEST ENGLISH HONEY, 15s. per 28lb. tin; sample, 2d.—DUTTON, Terling, Essex. R 40

HEALTHY DRIVEN BEES, 4s. per lot, cash; delivery in August. Orders in rotation. Boxes returnable.—H. KEMP, Frome, Somerset. R 39

STOCKS on three frames, 10s. 6d.; ditto on four, 11s. 6d.; 1906 fertile Queens.—W. Woods, Normandy, Guildford.

NEW LIGHT SCOTCH CLOVER HONEY, £3 cwt.; sample 3d. Deposit.—GILBERTSON, 43, High Street, Annan, Dumfriesshire. R 23

WANTED, 1-lb. SECTIONS NEW HONEY.—Price and particulars to T. G. TICKLER, Pasture Street, Grimsby.

QUEENS, specially selected from honey-gathering stocks; fertile Black English, 1906, in introducing cage, 2s. 6d., free, by return post; LIGHT EXTRACTED HONEY, 52s. 6d. cwt.; in screw-cap jars, 8s. dozen, sample 2d.; HONEY TINS (new), extra strong, no leaking, air-tight lids, 8s. 6d. dozen, 30lbs. capacity; COMBS BROOD, suit driven bees, healthy, 7d. each.—CHARTER, Tattingstone, Ipswich. R 21

SECTION GLAZING.—Best quality lace paper, made especially for bee-keepers' use; 100, in white pink, green, or blue, 6d., 300 1s. 4d., 500 2s. 2d., 1,000 3s. 9d., post free; lace one side, lace bands (lace both sides), white 2⅞, 3 and 3½ wide, 100 1s. 2d., 200 2s. 3d., 500 4s.; a few in pink and blue, 100 1s. 4d., 200 2s. 6d., post free.—W. WOODLEY, Beedon, Newbury. R 27

DRIVEN BEES, with Queens, commencing August; 3s. 6d. per lot, cash with order; boxes returned; orders in rotation.—T. PULLEN, Ramsbury, Hungerford. R 11

HEALTHY DRIVEN BEES, commencing August; delivery to August 20, 4s. per lot; after this date, 3s. 6d.; orders cash; delivered rotation; boxes returnable.—H. C. SMITH, The Apiary, Woodmancote, near Cirencester. R 10

READY for Delivery, healthy FERTILE QUEENS (1906), 3s. 6d., in introducing cages, post free.—CARBINES, Bee Expert, Cardinham, near Bodmin, Cornwall. Q 95

STING PROOF GLOVES, 2s.; with sleeves, 2s. 6d., post free. Why pay more?—KENT, Manufacturer, Dorchester Q 93

HOLIDAYS.—Cornwall; delightful situation near sea and Land's End; 30s. — S. HARBORNE, Apiary, St. Buryan, R.S.O. Q 69

QUEENS (celebrated Doolittle strain of Improved Italians).—A customer writes: "The virgin I had from you last year has done splendidly. Stock now on 33 Standard Frames." Virgins, 1s. 6d.; Fertiles, 5s. Safe delivery guaranteed. First come, first served.—DAVID TAYLOR, Ilminster. Q 64

WANTED, SECTIONS, first quality; prompt cash; also extracted per cwts.—W. CHILTON, Brookside, Polegate, Sussex.

NEW SECTIONS, HONEYCOMB.—Supplies wanted, at once.—SMITH, Cambridge Street, Hyde Park. Q 29

COMFORTABLE APARTMENTS for Brother Bee-keepers visiting Douglas. Terms: Tea, bed, and breakfast, 3s. 6d; or full board, 5s. per day.—MORSLEY'S, Merridale House, top of Castle Drive, Douglas, Isle of Man.

A PRONOUNCED SUCCESS.—The BURRITT BEE-GLOVE. With sleeves, 3s. 6d. per pair, post free. Without sleeves, 2s 6d. per pair, post free. The best, cheapest, and most satisfactory glove for bee-keepers.—EDWARD REYNOLDS, Glove Maker, Andover, Hampshire Wholesale prices to the trade

Editorial, Notices, &c.

HANTS AND ISLE OF WIGHT B.K.A.

SWANMORE BRANCH.

The annual show of the above branch was held at Bishop's Waltham on July 31 in connection with that of the Bishop's Waltham Horticultural Society. The feature of the show was the all-round excellence of the honey shown. Little or no dark or inferior honey was on view, a circumstance which correctly indicates the actual experience of bee-keepers in the district this season, though "takes" in a good many cases have been small. The Rev. W. E. Medlicott acted as judge, and made the following awards:—

Twelve 1-lb. Sections.—1st, W. G. Hedges; 2nd, E. Ainsley; 3rd, W. Cooper.

Six 1-lb. Sections.—1st, W. Cooper; 2nd, E. Ainsley; 3rd, F. Sandall.

Three 1-lb. Sections.—1st, E. Hedges; 2nd, W. Cooper; 3rd, A. Royds, jun.

1-lb. Section.—1st, E. Hedges; 2nd, Miss Martin; 3rd, E. Ainsley.

Novices Only — Three 1-lb. Sections. — Special prize to Miss E. Annels.

Largest and Best Display of Honey.—1st, W. G. Hedges; equal 2nds, E. Hedges and E. Ainsley.

Twelve 1-lb. Jars Extracted Honey.—1st, F. Sandall; 2nd, E. Ainsley; 3rd, W. G. Hedges.

Three 1-lb. Sections and Three 1-lb. Jars Extracted Honey.—1st, F. Sandall; 2nd, E. Ainsley; 3rd, Miss Martin.

1-lb Section and 1-lb. Jar Extracted Honey.—1st, E. Hedges; 2nd, E. Ainsley.

Three 1-lb. Jars Granulated Honey.—1st, E. Ainsley; 2nd, W. G. Hedges.

Two Shallow Frames of Comb Honey—1st, E. Ainsley; 2nd, W. G. Hedges; 3rd, E. Hedges.

MEMBERS ONLY.

24 lbs. Honey—Twelve 1-lb. Sections and Twelve 1-lb. Jars Extracted Honey. — 1st, W. G. Hedges; 2nd, E. Ainsley; 3rd, F. Sandall.

The awards in this last competition include a silver medal, bronze medal, and certificate respectively. — A. Royds, Jun., Swanmore, Bishop's Waltham.

Obituary.

DEATH OF MR. R. COCK.

The death took place on Sunday, at his residence in Stafford, of Mr. Robert Cock, F.R.H.S., the horticultural lecturer and instructor in gardening and bee-keeping for the Staffordshire County Council. Mr. Cock was appointed instructor in 1892, and as his duties took him into all parts of the administrative county, he had become a familiar figure, especially in the rural districts. A few weeks ago a movement was started in the county for presenting him with a testimonial in consideration of the great services he had rendered in connection with gardening, bee-keeping, and poultry-keeping in Staffordshire.—(*Communicated.*)

Correspondence.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper We do not undertake to return rejected communications.

AMONG THE BEES.

FIRING BLANK CARTRIDGES.

[6387.] First let me express my pleasure that one so well qualified as Mr. Crawshaw has apparently become a regular contributor to the pages of the Journal. I understand he is an enthusiast in regard to apiculture. Some years ago he was kind enough to write expressing a hope that a contribution, wherein he differed from me somewhat, would not displease, and I was glad to reply, "No." I would only welcome any criticism which would elucidate the truth. I can assure readers that I am very far indeed from looking on myself as infallible, and I should be only too well pleased to have my errors pointed out and corrected. With this preamble, let me as gently and succinctly as I can touch on three or four of Mr. Crawshaw's recent criticisms where he has fired blank cartridges.

Shot No. 1.—On page 224, in dealing with the running of an apiary, with four or five visits a year, he addnces Doolittle's authority quoted by me as an instance of boomeranging myself, because Mr. C. thinks the latter's teaching supports "W. Z. H." How? Why, Doolittle has already doubled the other's number of visits, with more to follow. This boomerang has, therefore, rebounded on the critic!

Shot No. 2.—"This nuclei" quoted from "A. H.," is, of course, wrong. Used as an adjective, with a singular or a plural noun, it should be nucleus hive or nucleus hives; and I fancy I could refer to such a use on my part scores of times. But, as quoted on page 284 from page 272, the Printer's Devil was not at fault, because I guess my manuscript, rightly or wrongly, will show the words as printed. I used the term "nuclei lots" advisedly, and maintain that

there is a distinction, and a difference. As the idea stood in my mind, the whole phrase is an equivalent of "a collection of nuclei."

Shot No. 3.—An aged queen not a cause of swarming? What! Who can point out a single writer of the one thousand and one who have given us bee-books who has not told us this simple truth! The suggested solution of "stoking" is rather finical criticism, because, young or old, it is all a question of food.

Rack or Crate.—We are getting no "forrarder" on this moot point, I fear. Out of deference to the expressed opinions of our Editors, I now write (at least, when I remember) the term as rack, but I always think of it and speak of it as crate, and in all my records I write it so. I am a little afraid if I were sitting an exam., and my pass depended on using rack alone, I would be plucked. If so, why?

"*A Swarming Incident.*"—The writer of No. 6382 would have saved himself some worry and trouble if he had been aware of a simple device, recorded in the JOURNAL several times, for discovering the hive from which his swarm had issued. Remove the swarm out of sight when they have taken possession of the hiving skep. Take half a cupful of bees, flour them well, and throw them down on a board or old newspaper, when, after a good shake, they will make for the spot where the swarm had settled; but, finding it vacant, they will at once make for their old home. In a few minutes a score or more of dusty bees will be found fanning busily at the entrance of the swarmed stock. Rightly gone about this device is infallible every time, and is well worthy of being preserved for future use. "Paste it in your hat," as the Americans express it.

Experiences.—Last year I had no swarms. This year, up to date, I have had none. Some say they have a swarming strain of bees. I cannot quite see what causes such excessive swarming with many. I have had dealings this season with common blacks, hybrid blacks from driven lots, hybrid Cyprians, hybrid Carniolans, hybrid Ligurians, and pure Italians. None have swarmed. The Carniolans are busy in three racks, filling every section with bees. A neighbour last year had three swarms, and the parent stock under similar circumstances. Whence the difference? The Cyprian cross are not specially "cross," but they have a strange style of stinging. They simply sit down on the hand and coolly thrust in their darts without any fuss or signs of animosity. Their spears can penetrate, however. They have a worse feature here, at least. Hundreds of the young come out every day crawling feebly about. If it is a sunny day they gradually gain strength and return to the hive. If it is cold, sunless, or with a strong wind blowing, so many appear to succumb that the ground round about is strewn with their corpses. Another peculiarity worth noting is that they seem lacking in the bump of locality. They enter the hives on either side of their own quite freely, and many even waste time attempting to find an entrance into an empty hive two to the left. With all this going on, it may be taken that progress in the supers is slow—very.

Our real honey season opened as late as July 21. Almost ever since we have had excellent bee weather, and, white clover standing out well, good work has been done, All hives are strong, and the heather is fast opening. With colonies all fit, we now only require suitable weather to count on an average season at least, in spite of the backwardness of spring and early summer. The price here is, so far as I can learn, 10d. per section, and they were advertised earlier in the *Elgin Courant* at 1s. each. Taken all over, the season up to date is only a fair one. So many hives spring-dwindled, so many more died out, and the genial weather was so long in coming that only the strongest colonies will give anything like a good average. In a few favoured localities reports are good—in some cases very good. —D. M. M., Banff.

"SELECTED QUERIES."

[6388.] May I be allowed to support the suggestion of your reverend correspondent on page 305 (No. 6383) that "Selected Queries" should be revived in the B.B.J., and if we can get replies from leading members of the craft I think it would be both interesting and instructive to us amateurs. Curiously enough, I wanted an answer myself only the other day to the very query put in the last par. of the letter referred to. I always try and fill my "heather" supers with built-out combs, and this means removing, extracting, and again replacing the frames by next evening at latest, or else one is likely to have a swarm coming off if the weather is hot. Last year I tried putting the wet sections back on the hives at once to be cleared out, but the bees had to be prepared for their journey to the moors the same night, and I found that they did not trouble to remove the clover honey from the sections at all, but filled them up with that gathered from the heather. Now, I like to have my heather-honey pure and unmixed, and so go to the trouble of taking four stocks of bees right on to "Didsworthy Warren," a remote spot in the heart of Dartmoor, a spot which may be described as "miles away from anywhere"—indeed, there is only a foot-track to guide one to it, but the old motor gets there all right in the end, and the result, so far as regards

heather-honey secured, well repays me for the trouble, while to watch the sun rise over the Tors of Dartmoor is well worth getting up at 3.30 a.m. for.

This year I have tried a new plan. I placed the wet sections down by a brook where my bees go for water, and the result was most satisfactory, for, the next day being fine, they cleaned up 300 sections, and there was not the slightest upset or sign of robbing. Perhaps you will say it was a risky thing to do, but the fact remains the bees were quite peaceful, and have remained so up till now.—RICHARD BAYLEY August 2.

[We are not sorry to have our friend Mr. Bayley's letter expressing similar views to those of the Rev. A. Headley on page 305, but think it will be generally admitted by those who were readers of the B.B.J. nearly twenty years ago, when the "Selected Queries" was a feature in our pages, that the subject was "played out" at the time. Not only was it made a feature of the B.B.J. in those days, but it was adopted on a much larger scale in American and other bee-papers, and the general result was by general consent found to be more confusing than instructive, as merely showing that "doctors differ" in bee-keeping as in other things; and so, the "Selected Query" having died out, we think it would be a retrograde step to revive it. In fact, as showing the trend of up-to-date bee-keeping, we rather think that most readers would consider that a slight dash of "clover flavour" would do no harm at all to a good section of the strongest and best-flavoured section of heather-honey.—EDS.]

ROSS-SHIRE BEE NOTES.

[6389.] The season here promises to turn out better than at one time seemed likely. The weather was not bad, but somehow we did not experience the heavy honey-flow usually associated with a dry July. St. Swithin's brought rain, and the following week was extremely wet and cold. The robbing note was sounded and drones being evicted, it looked as if all was over until a sudden return of sunshine caused honey to come in at a great rate.

Bees are working against time now. All this week the whirr of the mower was heard from morn to dewy eve. Several fields are still a mass of bloom and redolent of honey, but a few days will see them made bare. Opinions vary as to whether the crop is to be ahead of or back on last year's, but August and the heather will decide that point. Good stocks will give two to three racks of sections from clover. A stock of native bees is covering twenty-four frames, having over eighty sections filled with comb and honey, and a shallow super on top with foundation fully drawn out and partly stored. This is good, but a stock of Italians puts the other quite in the shade.

Five storeys full of bees from roof to floor-board, and honey being sealed in the top super placed empty above the preceding ones. I have given a rack of sections above all, and bees took possession at once.

By the way, bees are doing far better work in extracting supers than in sections. But for the great number of combed-sections left over from last season results would not be so good. Swarming has afflicted many, and absconding lots not a few have left their owners lamenting.

We are now on the eve of the heather-harvest, and stocks are in excellent condition to do the best of work.—J. M. ELLIS, Ussie Valley, July 28.

BEES UNITING OF THEMSELVES.

SURPLUS QUEENS AND SWARMING.

[6390.] I have taken your JOURNAL now for over two years, and, not having read or heard of a similar experience to my own, I though it might be of some interest to know that on July 20 two of my stocks swarmed simultaneously, and the two lots joined together. On returning them in the evening to one of the parent hives I caught and removed four queens as the bees were running into the hive. Again yesterday (Sunday, the 23rd) I had two swarms, and from these I took five surplus queens. Probably a good many of your readers are not aware how common an occurrence it is for several virgin queens to come off with swarms at times. On the day previous to that above I had another "happening" of an unusual kind which may be worth recording. A single-frame nucleus with queen cells, being dealt with for hatching out, apparently all hatched just before the time they were due for inspection, for on examining the frame I took five queens off the comb, besides leaving one on the frame, and there were some sealed cells left for hatching out later on.—W. FAY, Havant.

[Incidents like the above, though not unusual, are always interesting to readers, many of whom are not aware that it is a common occurrence for several young queens to issue along with second swarms or casts. —EDS.]

BEE-BREEDING.

[6391.] The remarks made by your correspondent, "D. M. M., Banff," on page 293, entirely misrepresent this branch of bee-keeping. It is not a fact that "nobody ever seeks to eliminate undesirable traits," and I feel sure that there are queen-breeders

in our country besides myself who pay careful attention to drone-breeding, and who take pains to breed for the improvement of honey-production and other important characteristics, and not for prolificness alone. If "D. M. M." had ascertained what is being done in this direction in this country he would not have written what he did.—F. W. L. Sladen, Ripple Court Apiary, near Dover.

A WORD IN FAVOUR OF CARNIOLANS.

[6392.] Poor Carniolans! They seem to be done for. Your correspondent, "E. L., Perthshire" (B.B.J., August 2, No. 6382), gives it to them very hard. Well, with as much sincerity as he does, I may say, not only that I have not to complain of them, but that they have done the best of all my stocks. Evidently there are Carniolans and Carniolans, and although, probably, we shall never have a perfect bee, yet I believe in the possibility of a selection which would do away with what is excessive in the swarming propensities of the Carniolans, whilst retaining their good qualities of gentleness and prolificness. Why does not "E. L." try that selection for himself.

I may add that I have several stocks of first-cross Carniolans which have given a very good account of themselves. One has swarmed once. Another has not swarmed for two years; has yielded me already three heavy supers this year, and is the gentlest stock in disposition in the whole apiary.—Br. Colomban, St. Mary's Abbey, Buckfast, Devon.

BEE NOTES FROM CORNWALL.

THE COMPARATIVE MERITS OF DIFFERENT RACES OF BEES.

A good many contradictory statements are made as to the relative values of English and foreign bees. I think much of this diversity of opinion arises from the absence of accurate experiment. Some extol Italians to the skies, others give them a bad name. Now, any bee-keeper of experience knows that the different stocks even of one race vary immensely in the same apiary. It might very easily happen that a stock of Italians would turn out an extra good one or the reverse, and the bee-keeper's report would be good or bad accordingly. For my part, I have had stocks of English bees that none could excel, and I have had some less excellent. I have one stock of Italian bees that I can find no fault with as regards vigour and utility, but the bees are not as gentle as most of my English stocks. It is the only Italian stock that I have, as I have rather a fancy for our old British race of bees, that are as good, I am certain, as any that can be obtained. My bees are, however, not absolutely pure English, as I have got them from many parts of England, and some show traces of Italian blood. I think a little crossing is of advantage; but one stock of Italians is quite enough for a very large apiary for crossing purposes. In this way we should have more English blood than any other, and, in my opinion, it will be a great pity if ever we cease to have a distinctive British hive bee.

I have tried Tunisian bees, but so far have always lost the queens from some cause or other before I had a working colony; but I have had Tunisian hybrids, and find them very good in every way, and in no way different to English bees, save in appearance.

To settle the comparative merits of different races, an exact experiment should be made as follows:—On the same day cut out the very finest queen-cell from an English stock and from an Italian stock, and get two of the very finest queens of each race that can be procured. On a date when both are laying make two artificial swarms of exactly the same weight—one English, one Italian. Let this be done early in the season. Put each on the same number of frames, and treat each exactly alike. Both hives should be kept on scales, and accurate particulars obtained. The artificial swarms should contain, say, 6 lb. of bees each. This should once for all settle the matter from the utilitarian point of view. Of course there are more points to be considered than the weight of honey obtained, such as the nature of the capping on the sections, etc., but the test should be made chiefly for honey-gathering powers. I have not the leisure to do this myself, and it is too late for anyone else to experiment this season, but perhaps some one will try it in 1907.

The experiment would be more complete still if two sets were dealt with, and one worked for extracted honey only and the other for sections.

It is to be hoped that some effort will be made to preserve English bees in their purity in at least one remote apiary. A time will come when they will fetch a fancy price, because the tendency is to introduce a lot of Italian blood. Bee-keepers like myself who are surrounded by many others cannot do anything in this way. A bee-keeper should be located a long way from others in order to really carry on his hobby or business in a satisfactory way. Unless isolated he cannot keep a large apiary; it would be too risky while his neighbours do nothing to keep free from foul brood. Besides, if apiaries are very near to each other there is likely to be trouble at the swarming season from mixed and lost swarms.

Price of Honey.—I am sorry to see that

there is still a tendency to undersell in the honey market. This is one result of the flooding of the craft by unsuitable persons. They get one good year, and forget that there are also lean years, and that it pays very badly for labour to sell at a very low price. Bee-keepers are unbusiness-like to accept whatever an advertiser chooses to offer. They should work as hard to get a good price as they do to get the honey.

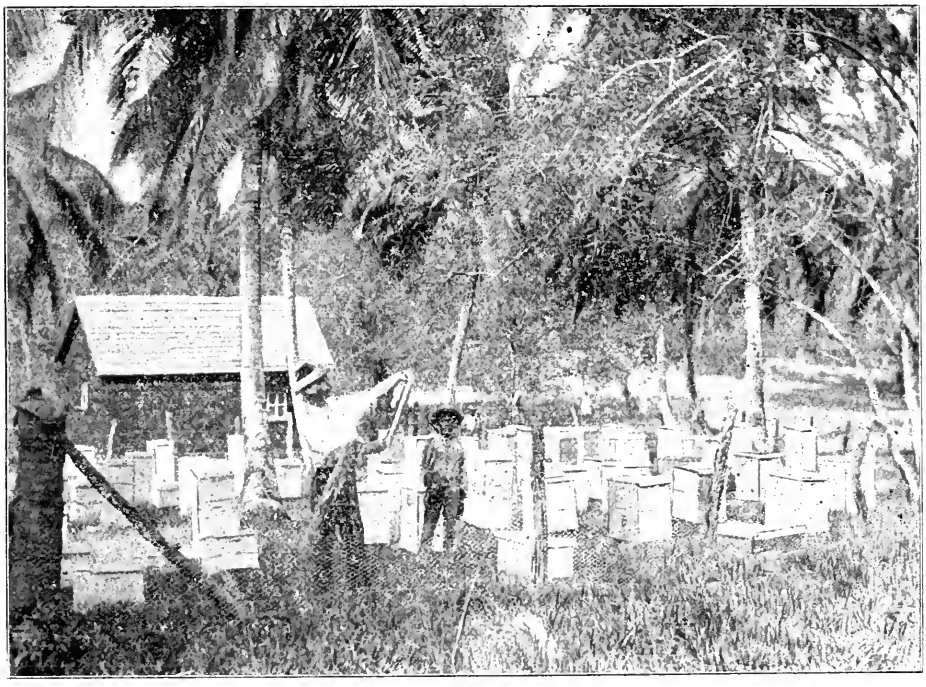
Raising Queens.—I am now able to state positively that large sealed queen-cells inserted in small mating-boxes, with a full supply of bees and a little brood, will develop into fine queens, quite as satisfactory as those hatched out in a large stock. I can also say that the only queen I have raised from the egg in a mating-box is small, similar to those raised in full stocks from small queen-cells. — W. J. FARMER, Cornwall

BEES IN JAMAICA.

[6393.] I enclose photo of Mr. Westmoreland's apiary at Annotto Bay, Jamaica, of which my brother, Mr. Watson Crawshaw, is manager. You will remember publishing an article by him in your RECORD for November, 1902. In describing photo, my brother says:—

"The building on left-hand is the honey-house, in the centre of picture a small coolie (who assists me, and often gets violently stung), and myself pretending to know a lot."

Hoping it will interest B.B.J. readers in the old country.—J. E. C., Launceston, Cornwall.



AN APIARY IN JAMAICA.

QUEEN-MATING.

[6394.] I am much obliged for your reply to my query, which I received by post this morning. As a matter of fact, an examination of the hive in question on Friday last showed a fair number of eggs in the cells, so presumably all is going on well. I omitted to say in my query that the swarm was really a second one—it had been out before, but returned to the hive, having apparently lost its queen, hence the swarm referred to in my query would be headed by a virgin queen. Nevertheless, the time the queen took to get fertilised—about three weeks—seems exceptionally long, judging by what I have read. Again thanking you for your reply, I am—J. H. W., Bingley.

WEIGHT OF SECTIONS.

[6395.] I took off a rack of sections the other day containing twenty-one sections of the ordinary 1-lb. kind, and, seeing they were extra well finished, I weighed them, after scraping off all propolis, etc. They weighed 23 lb. 15½ oz.; one of them turned

the scale at 20 oz. They are filled, I believe, with white clover honey. I wonder what is the record weight of a rack of twenty-one sections. Perhaps some reader of the B.B.J. will be able to say.—EAST SUSSEX, August 4.

BEES AND FRUIT GROWING.

[6396.] As an intending fruit-grower and bee-farmer, it may interest "H. O. M." (3373, p. 307) to know that I find the following books on fruit growing of great service:—"Profitable Fruit-growing," J. Wright, 1s.; "Chemistry of the Garden," H. Cousins, 1s.; and "The Varieties of Fruits," published at 2d. by the Royal Horticultural Society, Vincent Square, S.W., all of which are very reliable works, and are just what a beginner wants.—O. R. F., Regent's Park.

WEATHER REPORT.

WESTBOURNE, SUSSEX,
July, 1906.

Rainfall, ·53 in.	Minimum on grass, 37° on 2nd.
Heaviest fall, ·21 in. on 18th.	Frosty nights, 0.
Rain fell on 8 days.	Mean maximum, 71°
Below average, 1·98 in.	Mean minimum, 51·7
Sunshine, 261·7 hours.	Mean temperature, 61·3°
Brightest day, 25th, 14 hours.	Above average, 0·8.
Sunless days, 0.	Maximum barometer, 30·25 on 9th.
Above average, 27·2 hours.	Minimum barometer, 29·85 on 19th.
Maximum temperature, 79·5° on 30th.	
Minimum temperature, 41° on 1st.	

L. B. BIRKETT.

JULY RAINFALL.

Total, .76 in.
Heaviest fall, .27 in. on 13th.
Rain fell on fourteen days.—W. HEAD, Brilley, Herefordshire.

Queries and Replies.

[3375.] *Clipping Queens and Loss of Swarms.* At the beginning of this season, I had two stocks of bees in frame hives. I fed both stocks in spring and so got them in good condition and strong in numbers. Later on I clipped the wings of both queens in order to avoid loss of swarms, and examined the frames of both colonies each week, and cut out any queen-cells found on the combs; but I evidently missed one cell in the hive (No. 1) for the bees swarmed, and, in consequence of the queen's inability to take wing, naturally returned to their hive; the old queen being presumably lost in the grass near the hive. After a while, this same stock swarmed again, and, not being seen to issue, the swarm was lost, notwithstanding all my trouble in removing the cells. Of course, as you are aware, it is an easy matter to miss a queen-cell in June when the frames are so crowded with bees; and unfortunately, too, this lost swarm must have been a very large one as could be seen by the few bees left in the parent hive. The result is I have not had any surplus from this stock. Then, with regard to the second hive (No 2) about which I am now writing, it sent out a swarm in June, and I could not understand the bees hanging out so long before the swarm came off. My natural surmise was that the bees had come out with the old "clipped" queen, but, as I could not find her in front of the hive, I then came to the conclusion that No. 2 hive also, had swarmed before, as I knew there was a young queen with this swarm, for as soon as I put a few of the bees in a skep, the others all followed. Before running these back into the hive, I examined the frames and found a young queen on one. This frame I took away and then ran the swarm back with the other queen. After this operation, No. 2 did moderately well in supers, but lo and behold! on July 22, whilst looking through a nucleus hive, I noticed on the ground in front of same the old clipped queen from No. 2 hive. There could be no possible mistake after seeing the wings clipped. I really cannot understand this at all, unless it is a known fact that bees will protect an old queen and prevent young ones from killing her. This is what I should like your opinion on. The old queen in question must have been in the hive quite a month, but after tolerating her for that time they turned her out. I always look forward with pleasure for the B.B.J. and have derived much information from same. You will, of course, see that I have had rather a bad season, and have taken very little surplus in consequence of what is detailed above.—L. M. C., Holbeach.

REPLY.—The cause of your "bad season" is primarily traceable to the effort made to prevent loss of swarms by the American method of wing-clipping; a method never kindly taken to in this country, for reasons with which we entirely agree. In your case the initial mistake was in not removing all the queen-cells, but this error would have turned out a blessing in disguise had you not been so unfortunate as to lose the swarm. In fact, No. 1 hive would no doubt have yielded a good harvest of honey, and made a strong colony for next years' work, if the swarm—which followed loss of the parent queen—had not flown away and been lost. With regard to preservation of the old "clipped" queen of No. 2 hive, we can offer no explanation beyond saying it is a remarkable case; one of the exceptions proving the rule that "bees do nothing invariably."

[3376.] *Dealing with Foul Brood.*—I send herewith the worst piece of comb from a hive which I am thoroughly convinced is affected with foul brood. Immediately on discovery I destroyed all combs (excepting those containing sealed honey, that I have cut out for own use) frames, quilts, etc., and put the bees into a skep without food for two days. I

shall then run the bees into a fresh hive on full sheets of foundation and feed with medicated syrup. The hive, which was already painted inside, I intend scouring out well, as directed in Guide Book, with carbolic solution, and giving another coat of white lead. Would you kindly say whether I have done right? I have followed the instructions given in the British Bee-keepers' Guide Book as closely as possible, also looked the matter up in the back journals.—P. W. Olton, Kincardineshire.

REPLY.—Comb sent is badly affected with foul brood, and your prompt method of dealing with it was quite right. If followed up with care, there is no reason why you should not be successful in dealing with the trouble in question.

[3377.] *Domesticating the Humble-Bee.*—1. I have found a nest of the humble-bee (*Bombus Agrorum*) in our garden which I should very much like to put into a hive in order to enable me to study their habits. My father says he will provide the hive and help me if I first find out whether it is possible to attain my wish. I shall therefore, be much obliged if you will tell me whether it is possible, and, if so how it should be done? The nest is in a mound of earth and stones from which it can easily be dug out. 2. Can you also oblige by giving me the name of a book on humble-bees?—J. E. L. Junr., Blairhill, Stirling, N.B.

REPLY.—1. You will have little difficulty beyond carefully digging out the nest and providing a suitable box for housing it in. Our esteemed contributor Mr. F. L. Sladen exhibited a humble-bee's nest at a show held in Kent some years' ago in which the bees were seen working busily, the little creatures passing in and out of the nest, threading their way home between the spectators in the most interesting fashion. 2. Mr. Sladen's articles on "Our Wild Bees" can be had from this office.

[3378.] *Re-Queening Hives.*—I would be obliged if you will give me a line of advice on the following:—I have reared a queen in a small nucleus hive of two standard frames, with which I intend to re-queen the parent stock this August, and so I ask: Will it be necessary to cage the queen in the nucleus before uniting them to the parent hive, and insert her afterwards? Or could I not simply dust over all the frames with flour and put the frames of the nucleus in, as they are now with queen? The parent hive would, of course, be made queenless twenty-four hours previous to the operation.—H. W., Anerley, S.E.

Reply.—Your safest course will be to first cage the queen of the nucleus colony; then insert in the nucleus hive several combs of brood (without bees) from the stock to be re-queened. This done, set the nucleus, as prepared, on the stand of the stock to be re-queened, moving the latter to the stand of the nucleus. You will thus get all the flying bees of the parent hive into the nucleus. Then, after thirty-six hours, remove the old queen from the parent stock, and transfer the combs and bees of latter to the nucleus colony, which will have become a strong stock.

[3379.] *Are Bees a Nuisance to Neighbours?*—I am a bee-keeper of several years' standing and a regular subscriber to the BEE JOURNAL, and would be glad if you will kindly advise me in the following difficulty: I have a garden 12 yards wide, and about 80 long, attached to my dwelling house. At the far end, away from the house, I have four stocks of bees, about two yards away from a wall, say 5 ft. high, which faces south and runs the entire length of the garden. On the other side of this wall is my neighbour's garden, and for some reason my bees appear vicious this year and have stung my neighbour. I have done all I can to remedy this evil. Can my neighbour compel me to give up my bees, or remove them? I may say I came to reside here on purpose to keep bees, as is well known here to all. I send name and sign.—BEE-KEEPER.

REPLY.—Your neighbour can compel you to remove the bees if he can prove in a Court of Law that they are a source of danger, and a nuisance to him, not otherwise.

[3380.] *Transferring Bees—Old versus New Methods.*—Having just become a subscriber to the B.B.J., I will be obliged if you can help me in the following difficulty. I commenced bee-keeping about seven years ago, by purchasing a weak swarm in a straw skep, and the bees have gone on increasing till my apiary numbers six stocks, all in skeps, none of which have swarmed this year. Furthermore, I may say none of the hives have been touched to see their condition since the first was put on its stand seven years ago. I have now obtained a copy of the "Guide Book," and, acting on the information gathered from it, I intend to drive the bees from all my skeps and put them into frame-hives this autumn. My next idea is to purchase three modern frame-hives, costing about 10s. or 12s. each, from a reliable firm. Three of the six skeps (numbered 1, 2, and 3, respectively) were supered this year, and the present prospective result is:—No. 1, about three 1lb. sections; No. 2, four or five ditto; No. 3, supered with a straw cap (holding 12lb. of honey), will be about full up. Taking my seven years of bee-keeping in skeps, and leaving out the present year's results, I have had about 4lb. of honey on the skep plan. I do not think, therefore, that bee-keeping can be called a profit-making pursuit, if carried out on old-fashioned lines, and in order to bring about a better state of things in my apiary, I purpose buying three hives at price named, have the frames fitted with full sheets of foundation, and then drive the whole six skeps, and unite the bees of two skeps in each one of the frame-hives. By so doing, I shall make three stocks in all with two lots of the driven bees in each of the frame-hives. I have never driven bees before, and so I ask:—1. Do you think I shall be successful without getting any help, and will two stocks peaceably unite without any fighting? 2. As the skeps with supers on must be stronger in bees than those not supered, would it be best to unite a weak lot to a strong one in each case in order to equalise the bees in each of the frame-hives? 3. Then, with regard to the queens to head each of the frame-hives. Should I have to choose between them and destroy the worst, or let the queens fight it out

among themselves? Finally, I ask (4) when is the proper time to start the above operations? I have probably not stated my case very plainly, but hope you will be able to make it out and give me a few hints to help me on the way of getting my bees to work on better lines than the old skep plan. Thanking you in anticipation, I send name and sign—H. G., Bucks.

REPLY.—It depends largely on yourself whether you can go through the work with a sufficient amount of success to enable you to dispense with outside help. Many of those who read the "Guide Book" carefully have driven bees, and united them very well on a first trial. The question is, can you? We should advise you to attend a bee-show, if possible, and see bees driven by an expert in the bee-tent. This done, form your own conclusions on the point. 2. It shows useful forethought to ask this question, but you can judge better with regard to equalising the bees for each stock when driving operations are in progress. Make the frame-hives as equal in population as you conveniently can. 3. The queens of the strongest lots should be selected for heading the new colonies, if you can manage it readily, but do not let that point be over-strained; the fittest queens usually survive when matters are decided by combat. 4. The end of August or first week in September is the best time to build-up stocks from driven bees.

Bee Shows to Come.

A nominal charge of 2s. 6d. is made for notices (not exceeding 7 lines) in this column, 10 lines charged 3s. 6d. up to 15 lines 5s., which covers cost of insertion from order till date of show. Cash should accompany orders for insertion.

August 8 to 10, at Middlesbrough.—Show of Honey, etc., in connection with the Royal Yorkshire Agricultural Society. Schedules and form of entry from John Maughan, Secretary, Blake-street, York. **Entries closed.**

August 8, at Clevedon, Somerset, in connection with the Horticultural Show.—The Somerset B.K.A. will hold its first annual Honey Show as above. **Entries closed.**

August 9, at Abingdon Park, Northampton. — Honey Show of the Northants B.K.A. Special prizes, including the Baroness Burdett Coutts' prize hive for cottager members, also three open classes, including one for single 1 lb. jar honey. **Entries closed.**

August 9, at Madresfield, Malvern. — Annual Show of the Worcestershire Bee-keepers' Association. Open class. Schedules from Mr. Geo. Richings, 2, Shrubbery Terrace, Worcester.

August 15, at Wye.—Kent Honey Show. Sixteen classes for Honey and Bee Products. Greatly increased cash prizes; Classes 1 to 11 open to Kent; Classes 12 to 16 open to the United Kingdom. Open classes include—Single 1 lb. jar light extracted honey; single 1-lb. jar dark ditto, 20s., 10s., 5s., in each class; 1-lb. section, silver cup. Trophy class First prize silver cup, value £3 3s. Best collection of Bee Appliances, first and second prizes. Special arrangements for Bee Demonstrations and many other new attractions added this year. Schedules on receipt of stamp from J. Tippen, Secretary, Wye, Ashford Kent. **Entries close August 10.**

August 16, at Yetminster, Dorset. — Annual Show of the Yetminster and District B.K.A. held in a field kindly lent by Mr. Jolliffe. Four open classes, including three 1-lb. jars extracted honey, three 1-lb. sections, and cake of beeswax. Schedules from G. Leeding, Hon. Sec., Bradford Abbas, Sherborne. **Entries close August 10.**

August 17. — In Public School, Portwilliam, Wigtownshire.—Honey Show in connection with the Horticultural Society. Classes for sections and extracted honey, open to amateurs and cottagers. Challenge class (open to all) for three 1-lb. jars extracted honey; prizes, 20s., 12s., 8s., and 4s.—Schedules from Secretary, Horticultural Society, Portwilliam, N.B.

August 18, at Borgue, N.B.—Honey and Flower Show, to be held at Borgue, Kirkcudbright, N.B. Open classes. Schedules from E. S. Munro, The Academy, Borgue, Kirkcudbright, N.B. **Entries close August 15.**

August 22 and 23, at Shrewsbury.—Annual Show of the Shropshire B.K.A. in connection with the Horticultural Society's Great Floral Fête in "The Quarry," Shrewsbury. Seven open classes for honey. Classes with free entry for single 1-lb. jar and single 1-lb. section. Schedules from S. Cartwright, Hon. Secretary, Shawbury, Shrewsbury. **Entries close August 10**

August 24, at Exeter.—Annual Show of the Devon B.K.A., in conjunction with the Devon and Exeter Horticultural Society. The Baroness Burdett-Coutts' prize, hive for the best exhibit shown by cottager members, Dr. Philpott's prize of £1 1s., for the two best sections of comb honey. All open classes. Schedules from the Hon. Sec., A. S. Parrish, Heavitree Road, Exeter. **Entries close August 18.**

August 25, at Barnton, Cheshire.—Honey Show in connection with Floral and Horticultural Exhibition—two country, and six local classes for honey and wax. Cheshire B.K.A. silver medal to winner of 1st prize for county honey. Schedules from F. Hindley, Hon. Sec., 88, Runcorn Road, Barnton, Northwich. **Entries close August 18.**

August 28, at Cartmel, near Grange-over-Sands.—Show of Honey, etc., in connection with the Cartmel Agricultural Society. Schedules from William Cragg, Secretary, Cartmel, via Carnforth. **Entries close August 16.**

August 29, at Chester.—Cheshire B.K.A. Show in connection with the County Agricultural Society. Open classes for Hives, Observatory Hives, Sections, and Extracted Honey. Baroness Burdett Coutts' prize hive for best exhibit shown by cottager member. Seven classes for members. Schedules from T. A. Beckett, St. Werburgh Chambers, Chester. **Entries Close August 8,** or at double fees, **August 15.**

August 29, at Forbury Gardens, Reading.—Honey Show of the Berks. B.K.A. Schedules from the Hon. Sec., D W. Bishop-Ackerman, 161, King's Road, Reading. **Entries close August**

August 30, at Montgomery.—Honey Show in connection with Horticultural Exhibition. Two open classes for six 1-lb. sections and six 1-lb. jars extracted honey. Prizes, 10s., 5s., 2s. 6d. Entry fee, 1s. each class. Schedules from Mr. W. J. Jones, Secretary, Montgomery. **Entries close August 23.**

September 1, at Bramhall, Stockport.—In the grounds of the Bramhall Hall. Honey Show—under the auspices of the C.B.K.A. Liberal prizes. Low entrance fees. Open and Local (three mile limit) Classes. Schedules from John Sibson, Hawthorn Grove, Bramhall. **Entries close August 24.**

September 8, at Dumfries.—South of Scotland B.K.A. 14th Annual Show of Honey, Bees, and Appliances. Five open classes—viz., three 1-lb. jars, three 1-lb. sections, and for single jar and section (free entry), and cake of wax; also handsome money prizes and valuable medals, for members only. Schedules from Jas. Johnstone, Sec., Nelson Street, Maxwelltown. **Entries close September 1.**

September 12 and 13, at Edinburgh.—Thirteenth Annual Exhibition of Midlothian B.K.A. in Waverley Market. Open classes for six sections heather, six sections flower, six jars heather, six jars flower. Prizes, 15s., 10s., 5s. Entry, 2s. per class. Schedules from W. Weir, Heriot, Midlothian.

September 13, at Castle Douglas.—Honey Section. Dairy Show. Liberal prizes. Five open classes—viz., three 1-lb. jars, three 1-lb. sections, single jar, single section, and for cake of beeswax. Schedule from Jas. Johnstone, or from L. Aird, Hard-

gate Schoolhouse, Dalbeattie. **Entries close September 1**

September 8 to 15, at the Agricultural Hall, London.—Honey Show in connection with the Confectioners', Bakers', and Allied Traders Annual Exhibition and Market. (See large advertisement on page i.) **Open to all British Bee-keepers.** Entry fee in each class one shilling. Schedules from H. S. Rogers, Secretary, Exhibition Offices, Palmerston House, Old Broad Street, London, E.C.

September 20, 21, and 22, at Crystal Palace.—Surrey B.K.A. Annual Exhibition of Bees, Honey, Wax, and Appliances, etc. Twenty-six classes (ten open to all). Increased prizes and medals. Schedules from F. B. White, secretary, Marden House, Redhill, Surrey. **Entries close September 7.**

September 22 to 29, at the Agricultural Hall, London.—Honey Show in connection with the Twelfth Annual Exhibition and Market of the Grocery and Kindred Trades. Nearly £50 in prizes for honey and beeswax including four prizes of £4, £3, £2, and £1, in honey trophy class. **Open to all British Bee-keepers.** Schedules from H. S. Rogers, Secretary, Exhibition Offices, Palmerston House, Old Broad Street, London E.C.

September 26, at Altrincham.—Show of Honey Products, in connection with Altrincham Agricultural Show. Open to United Kingdom: Classes for Hives, Observatory Hive, 12 Jars Extracted Honey. Open to County of Chester only: Classes for Trophy, Amateur-built Hive, Two Shallow Bars, 12 Jars Run, 12 Sections, Wax, etc. Special classes for cottagers. Special classes for Society's district. Liberal prizes. Low entrance fees. Schedules from Mr. J. H. Hall, 2, Dunham Road, Altrincham. **Entries close September 9.**

October 9 to 12, at the Agricultural Hall, London.—Show of Honey and Bee Produce in connection with the British Dairy Farmers' Association. Numerous and liberal prizes for honey, etc., including the valuable Silver Challenge Cup of the B.B.K.A. Schedules from Mr. Wm. O. Young, Secretary, 12, Hanover Square, London, W. **Entries close September 12.**

Notices to Correspondents & Inquirers.

A. W. (Anerley).—Bees Dying Outside Hive.—Bees sent appear very young; too young to venture outside their hive. But beyond saying this, we see nothing to indicate cause of death. Possibly the warm weather may have tempted them forth, and not being able to take wing, they would perish on the ground, as stated.

H. P. D. (Nottingham).—Comb Foundation Making.—The process of preparing wax sheets and converting same into comb-foundation is far too complicated a business for us to give the necessary description in this column, even if we were sufficiently informed on the subject ourselves, which we are not. The "Root" machine you have acquired must be one of the ordinary machines formerly used by that firm, who now manufacture foundation only by the "Weed" process. For those who care to make their own comb-foundation the "Rietche" press is, we think, more suitable than the old-style roller press, as the wax sheet is "cast" between two compressed plates, thus dispensing with all the paraphernalia of tanks and dipping.

Country Rambler (Omagh).—Bee Forage.—The plant is *Symphoricarpus racemosus* (snow berry), a native of North America, and cultivated in gardens in this country. Nectar in abundance collects in the base of the flower and on the inner wall of its dilated lower portion, and is prevented from flowing out by long close hairs, extending inwards upon the lobes of the corolla. Nectar is collected by bees, but where wasps are very abundant, these get the greater part of it.

Vacation (Warwick).—Removing Supers.—Unless there is plenty of heather growing within reach of your bees, all supers should be removed before you leave home. If allowed to remain on the hives till September the bulk of the honey, now in surplus-chambers, will be carried down into body boxes by the bees themselves.

Sussex Downs (Brighton).—Removing Unripe Honey.—Unsealed honey should never be taken from hives except under special circumstances, because it is not sufficiently ripened for keeping purposes. In your case we should put the shallow frame in question through the extractor and give it back to the bees as food; then uncap the sealed portion and extract it for household use.

Forester (Glos.).—1. The "mating boxes" referred to are those in which queen bees are kept until fertilised, on what is known as the "Swarthmore" plan. 2. The plan described in the "Guide Book" is as good as any you can try. Swarms hived on "starters" only of foundation usually build much superfluous drone-comb, hence the advantage of using full sheets of foundation.

J. Price (Hereford).—Queen Cast Out.—The insect sent is an adult fertile queen. It appears to be a case of re-queening by the bees themselves, and the fact of the stock yielding 45lb. of honey last year, and doing badly this season, it seems a much-needed case of changing queens.

C. H. E. (Horsham).—Dealing with Unfinished Sections.—It is very advantageous in the closing days of the honey season to remove finished sections from racks and replace them with others partly completed. The bees may be well able and willing to finish off partly-filled ones, where they would not start work at all in empty sections if offered them.

W. J. F. (Manchester).—Late Delivery of the B.B.J.—We regret to hear of your trouble in getting your B.B.J. in time, but your local newsagent is at fault, not John Heywood. That firm have a full supply of the B.B.J. every Wednesday afternoon from our printers in London, and the copies are in Manchester before 5 a.m. on Thursday. It is, therefore, your local man who needs what you term "stirring up."

Suspected Combs.

Amateur (Luton).—There is no foul brood in comb sent, and it is different from chilled brood. In fact the dead larvæ has much of the appearance described in the ABC of Bee Culture as "black brood." A little trouble in examining the dead larvæ would make it clear why these bees do not carry the brood out themselves.

C. H. E. (Horsham).—Very bad case of foul brood. We advise burning the lot, at once.

P. M. R. (Settle).—No foul brood in small bit of comb sent. The dead larvæ is chilled only.

Anxious (Worcester).—Comb shows a slight attack of foul brood only, in which the use of known preventives would probably be effective.

Honey Samples.

C. L. (Lincs.).—1. Sample is mainly from clover, and good on several points, but while quite suitable for a local show-bench, it would hardly stand a chance of winning at a London show. 2. Granulation may be retarded by keeping honey in a warm, dry cupboard where it will not be exposed to the light. We shall be very pleased to have photo, as promised, and, if suitable, we will have it engraved for our "Homes" pictures.

Hudd (Lindley).—The honey sent is thin and of poor flavour, the latter being rather strong and rank. It might sell when granulated better than in liquid form, if it can be kept from fermenting.

B. R. (Rotherham).—Honey will be quite suitable for table use, but not as bee-food.

Diana (London, E.C.).—There is no honey dew in sample, its dark colour being due to the forage it was gathered from. It is hardly suitable for table use. The flavour is coarse and rank, while the aroma is unpleasant. It appears to be gathered mainly from privet.

Special Prepaid Advertisements

Twelve words and under Sixpence: for every additional Three words or under, One Penny.

HEALTHY STOCKS, in good Standard Hives, 20s. each.—JARVIS, Coleford, Glos. R 85

EXTRACTED HONEY, 50s. cwt.; 1lb. glazed sections, 100s. gross; carriage paid.—THE RAEBURN APIARIES, Sawbridgeworth. R 91

EXCHANGE young or old Ferrets for Driven Bees. —W. POCOCK, 38, Aylesbury Road, Bromley, Kent. R 90

1906 PROLIFIC QUEENS, 3s., in introducing cage. Safe arrival guaranteed. — BR. COLOMBAN, Buckfast, Buckfastleigh, Devon. R 89

HEALTHY DRIVEN BEES, 5s per lot. Delivery commencing on August 18th. Boxes free.—W. D. T. RICHARDS, Postman, Kingswinford, Dudley. R 88

QUEENS, selected from honey-gathering stocks.—Black English, fertile, 1906, 2s. 8d., free, in introducing cage, by return. Nuclei, four frame, 10s., packed free. Brood Combs, suit driven bees, 7d. each. Light Honey, 14s. per 28lb. tin, 5/8. 6d. cwt.—CHARTER, Tattingstone, Ipswich. R 87

FOUR DOZEN SAINFOIN SECTIONS, best quality, 8s. dozen. NORTH, Poplar Hall, Cressing, Braintree, Essex. R 86

HONEY, three to four cwt., very fine, in 28lb. tins, 6d lb. "BEEKEEPER," 17, Catherine Street, Salisbury. R 96

HONEY, finest quality, 28lb. tins, 6d. lb. Sample 2d. H. MAY, Kingston, Wallingford. R 95

ENGLISH-MADE HONEY JARS (1lb., screw cap), 15s. 6d. gross, two gross 30s.—JAS. DYSON, Stainforth, Doncaster. R 93

BEES of my hardy prolific strain of selected workers. 1906 tested Queens, 3s. 6d. Three-frame Nuclei, with Queen, 12s. 6d. Bees, 1s. 6d. lb., for 5lb. lots or over. Packages to be returned. Guaranteed healthy. Safe arrival.—WHITING, Valley Apiaries, Hundon, Clare, Suffolk. R 94

HEALTHY DRIVEN BEES, with Queen, 5s. per lot. Package returnable. — JOHN P. PHILLIPS, Spetchley, Worcester. R 92

HONEY, the usual quality, but supplies short, 56s. per cwt.; 28lb. tins, 14s. Sample 3d.—OWEN BROWNING, Ashley, Kingsomborne, Hants.

HONEY EXTRACTOR, 19s. 6d., cost 25s.; large WAX EXTRACTOR, 8s. 6d., cost 12s. 6d.; both new.—HEWETT, Laburnum Apiary, Alton, Hants.

TWO STOCKS OF BEES, three empty bar-frame hives, geared extractor, heather press, smoker, super clearer, good condition, 50s. the lot; owner going abroad.—PICKTHALL, Low Laithe, Bingley, Yorks.

QUEENS, choice fertile 1906, bred from my non-swarming stocks, 3s. each; immediate despatch. —TAYLOR, Hollyhurst, Boldmere Road, Wylde Green, near Birmingham. R 75

HEALTHY DRIVEN BEES, with Queen, 5s. per lot; also 1906 Queens, 2s. 6d. each; boxes returnable; 10th season.—A. R. MORETON, Expert, Hallow, Worcester. R 74

MEADOWS, Syston.—Clearance sale of extractors, observatory, hives, etc. Prices on application. R 72

IMPORTED ITALIAN QUEENS, 6s. 6d.; home-raised Italian and Carniolan, 5s.; British, 4s.; swarms —Nuclei or full Colonies. Fair prices.—E. WOODHAM, Clavering, Newport, Essex. R 59

DRIVEN BEES wanted; any quantity.—E. H. TAYLOR, Welwyn, Herts. R 61

WANTED, a few cwts. LIGHT HONEY.—Sample and lowest price to SHACKLETON, Thorner, near Leeds. R 48

SINGLE FRAME OBSERVATORY HIVE, with space for sections over.—HEWETT, Laburnum Apiary, Alton, Hants. R 45

DRIVEN BEES; large supply; strong, healthy lots, with Queen, 5s.; also laying 1906 Queens, 2s. 6d. —T. BRADFORD, Expert, 68, Droitwich Road, Worcester.

SECTION GLAZING.—Best quality lace paper, made especially for bee-keepers' use; 100, in white pink, green, or blue, 6d., 300 1s. 4d., 500 2s. 2d., 1,000 3s. 9d., post free; lace one side, lace bands (lace both sides), white 2¾, 3 and 3½ wide, 100 1s. 2d., 200 2s. 3d., 500 4s.; a few in pink and blue, 100 1s. 4d., 200 2s. 6d., post free.—W. WOODLEY, Beedon, Newbury. R 27

DRIVEN BEES, with Queens, commencing August; 3s. 6d. per lot, cash with order; boxes returned; orders in rotation.—T. FULLEN, Ramsbury, Hungerford. R 11

READY for Delivery, healthy FERTILE QUEENS (1906), 3s. 6d., in introducing cages, post free.—CARBINES, Bee Expert, Cardinham, near Bodmin, Cornwall. Q 95

HOLIDAYS.—Cornwall; delightful situation near sea and Land's End; 30s. — S. HARBORNE, Apiary, St. Buryan, R.S.O. Q 69

WANTED, SECTIONS, first quality; prompt cash; also extracted per cwts.—W. CHILTON, Brookside, Polegate, Sussex.

A PRONOUNCED SUCCESS.—The BURRITT BEE-GLOVE. With sleeves, 3s. 6d. per pair, post free. Without sleeves, 2s 6d. per pair, post free. The best, cheapest, and most satisfactory glove for bee-keepers.—EDWARD REYNOLDS, Glove Maker, Andover, Hampshire Wholesale prices to the trade

Editorial, Notices, &c.

THE LATEST BEE SCARE.

BEE-PARALYSIS.

Reverting to the brief reference—in our issue of July 19—to the "latest bee scare," and the intention expressed therein of again referring to the subject, we may say the "scare" has not yet died out. Further articles on the subject have appeared in the daily press, and press-cuttings have been sent to the B.B.J. office by bee-keepers naturally anxious to know if the craft in which we have so deep an interest is really doomed to destruction. The curious part of the matter is that our good friend Mr. E. H. Bellairs, the active and indefatigable hon. secretary of the Hants and Isle of Wight B.K.A. for many years past, has not said a word in print on the subject, while one of his local hon. secretaries, Mr. Cooper, of whose experience, or even knowledge, of bee-craft we know nothing, has, so to speak, made himself famous by letters to the Press, in which he refers to bee-paralysis as "a new and highly infectious bee-disease," at present (happily) confined to the Isle of Wight, but which "if it spreads to the mainland, will probably mean the ruin of the bee-industry in England."

All this is, no doubt, very alarming from Mr. Cooper's point of view; but, as stated in our former reference to the matter, bee-paralysis has been known to us, and to all who are versed in the literature of bee-keeping, for many years past.

Bee-paralysis has not, so far, affected bee-keeping in this country to any extent, and on this account no one here has closely investigated its cause or possible means of cure, though several remedies, such as sulphur, salt, re-queening, etc., have been mentioned from time to time in our pages.

In America, however, where the disease first made its appearance and has proved so real a menace to the industry, much more has been learned as to the nature and progress of the malady. We therefore print below what is said of it in the "A.B.C. of Bee-culture," a work regarded as authoritative by the leading bee men of U.S.A.:—

BEE-PARALYSIS.

This is a disease that is much more prevalent and virulent in warm than in cold climates. Almost every apiarist in the North has noticed at times, perhaps, one or two colonies in his apiary that would show bees affected with this disease. But it seldom spreads or makes any great trouble; but not so in the South. It is known to affect whole apiaries, and seems to be infectious. Unless a cure is effected in some way, it will do almost as much damage as foul brood itself.

Symptoms.

In the early stages an occasional bee will be found to be running from the entrance, with the abdomen greatly swollen, and other respects the bee has a black, greasy appearance. While these sick bees may be scattered through the hive, they will sooner or later work their way towards the entrance, evidently desiring to rid the colony of their miserable existence. The other bees also seem to regard them as no longer necessary to the future prosperity of the colony. In fact, they will tug and pull them about as they would at a dead bee until they succeed in getting them out on the grass, where the poor bees seem willing to go to die alone. Another symptom is that the bees often show a shaking or trembling motion. In the earlier stages, so far as I can remember, this peculiarity does not appear; but later on it manifests itself very perceptibly.

Treatment and Cure.

As yet we know of no reliable cure. In many cases destroying the queen of the infected colony, and introducing another from a healthy stock, effects a cure. This would seem to indicate that the disease is constitutional, coming from the queen; but in the South, where the disease is much more prevalent and destructive, destroying the queen seems to have but little effect. Spraying the combs with a solution of salt and water, or of carbolic acid and water, has been recommended; but, so far as I know, these do little or no good. One writer recommends removing the diseased stock from its stand, and putting in its place a strong, healthy one. The diseased stock is then removed to the stand formerly occupied by the healthy bees. He reports that he has tried this in many cases, and found that an absolute cure followed in every instance. The *rationale* of the treatment seems to be that the bees of the ordinary colony having bee-paralysis are too much discouraged to remove the sick; as a consequence, the source of infection—that is, the swelled shiny bees—are allowed to crawl through the hive at will. But when the colonies are transposed, the healthy, vigorous bees of the sound stock carry the diseased bees entirely away from the hive. The sick and the dying being removed, the colony recovers.

Mr. O. O. Poppleton, of Stuart, Fla.,

has had a large experience. One plan that he uses is as follows:—

He sprinkles sulphur over the affected bees and combs, but not until all the diseased brood in the colony has been removed and put into a strong, healthy one; for Mr. Poppleton says the sulphur kills all the unsealed brood and eggs; that no harm results in putting the brood among healthy bees, as he finds the source of the malady is not in the brood or combs, for he has put combs from paralytic colonies repeatedly into healthy ones, and never (but once) did the disease develop in any such colony, and that was a year afterwards.

At first the disease seems to get worse instead of better. The colony will dwindle, but in two weeks there will be a decided improvement, and finally the colony will be cured, and will stay cured. In many cases, Mr. Poppleton thinks, it may be necessary to repeat the application of the sulphur about ten days after the first one. This makes sure that every bee has received a curative quantity of the sulphur, even if it were not in the hive at the first dose.*

While the foregoing has worked well, yet because it is attended with a rapid reduction of the strength of the colony so treated, and because the disease has a tendency to run in certain strains that are very susceptible to it, Mr. Poppleton thinks that, in the long run, it may be better to use the following plan:—He forms as many nuclei from strong, healthy stocks as there are sick colonies to be treated. As soon as the nuclei have young laying queens, he gives them, as fast as they can take care of them, one or two frames of the oldest capped brood from the paralytic colonies, and thereafter till all the brood of such colonies is used up. The diseased bees and queen he next destroys with sulphur fumes, fumigating the hives at the same time.

Repeated tests have shown that paralysis is never transmitted by brood or combs, but that it is carried by the dead or sick bees. It is, therefore, important that in giving the combs to the nuclei there be no dead bees in the cells.

Mr. Poppleton prefers this to the sulphur plan because he thus gets rid of all diseased bees and queens that might transmit the trouble to their descendants and has, moreover, healthy young queens in the colonies that are as strong as, or stronger than, if he had followed the sulphur plan, which plan does not eradicate the hereditary tendency that may be left in the old queen. If not convenient, then, to use the nucleus plan, replace the old queen and use the sulphur.

* Always spray the sulphur on in the evening.

NOTTS BEE-KEEPERS' ASSOCIATION

ANNUAL SHOW.

The above was held in connection with the Mansfield Horticultural Society, in the beautiful grounds kindly lent to them by Mrs. Clarke, Carr-Bank, on Bank Holiday, August 6th, the day being delightfully fine and the attendance a record one.

The entries in the Bee and Honey Department was also a record one, and the quality of the honey staged was excellent. Mr W. Broughton-Carr, London, officiated as judge of the Honey Class, assisted by Mr. W. Herrod, Luton, the awards being as follows:—

Trophy of Honey in any Form and of any Year.—1st, W. Ball, Eagle Hall; 2nd, W. L. Betts, Mansfield Woodhouse; 3rd, D. Marshall, Cropwell Butler.

Twelve 1-lb. Jars Light-coloured Extracted Honey.—1st, T. Marshall, Sutton-on-Trent; 2nd, W. L. Betts; 3rd, W. Sentance, Shelton; 4th, J. Willson, Shirebrook.

Twelve 1 lb. Jars Dark-coloured Extracted Honey.—1st, A. G. Pugh, Beeston; 2nd, G. Marshall, Norwell; 3rd, D Marshall; 4th, W. Ball; h.c., T. Hilton, Laxton.

Six 1-lb Sections.—1st, D. Marshall; 2nd, G. Marshall; 3rd, E. G. Ive, Boughton.

Six 1-lb. Jars Granulated Honey.—1st, J. North, Sutton; 2nd, A. G. Pugh; 3rd, G. H. Pepper, Farnsfield; h. c., R. G. Turner, Radcliff.

One Shallow Frame of Honey for Extracting.—1st, J. Willson; 2nd, G. Marshall; 3rd. J. North; 4th, W. Ball.

Six 1-lb. Jars Extracted Honey (Novices).—1st, J. Willson; 2nd, W. L. Betts; 3rd, J. North; h.c., W. Adams.

Honey Vinegar.—W. Ball.

Observatory Hive with Bees and Queen.—1st, E. G. Ive; 2nd, G. Marshall; 3rd, W. L. Betts.

Beeswax.—1st, G. Marshall; 2nd, W. Ball.

Mr. George Hayes, of Beeston, hon. secretary to the association, delivered several lectures during the afternoon to large audiences.

Mr. W. Broughton Carr held an examination during the day for the 3rd class experts' certificates of the B.B.K.A., four candidates presenting themselves.—*(Communicated.)*

NORTHAMPTONSHIRE B.K.A.

ANNUAL SHOW.

The annual show of the N.B.K.A. was held on Thursday, August 9 (by permission of the Corporation) in Abington Park, Northampton, the Museum Committee placing a large, light room at our disposal The entries numbered 187, over 175 of which were staged. In the two open classes for single 1-lb. jars of honey the entries numbered 84; these were set up at one end of the room on step-staging, and produced

an interesting display. Some excellent supers of honey were shown in competition for the Baroness Burdett-Coutt's prize, also several not for competition.

The Honey and Wax exhibits were judged by Mr. W. Herrod, while Mr. Alderman Tonsley placed the awards in the class for cakes sweetened with honey. Mr. Herrod gave demonstrations in the bee tent, and lectured to the large audiences who crowded aronnd the tent. The show was, on the whole, one of the best ever held by the Association.

Twelve 1-lb. Sections.—1st, H. Collins, Berry Wood; 2nd, C. Saunders, Kingsthorpe; 3rd, Jas. Adams, West Haddon; 4th, Geo. Page, Holcot; v.h.c., H. England; h.c., W. Manning.

Twelve 1 lb. Jars (light) Extracted Honey.—1st, C. Wells, Oxendon; 2nd, G. Odell, Roade; 3rd, Jas. Adams; 4th, A. Arlidge, Lower Weedon; 5th, W. Manning; v.h.c., G. Page; h.c., H. Clues, Long Buckby.

Six 1-lb. Jars (dark) extracted Honey—1st, Jas. Adams; 2nd, F. J Old, Piddington; 3rd, W. Manning; v.h.c., G. Odell.

Six 2-lb. Jars Granulated Honey.—1st, J. Adams. (No other prize awarded).

Three Shallow Frames of Honey for Extracting.—1st, J. Adams; 2nd, C. J. Burnett, Northampton; 3rd, C. Wells; 4th, W. Manning.

Beeswax.—1st, C. Wells; 2nd, J. S. Partridge, Wollaston; 3rd, Mrs. Collins; 4th, G. Odell; v.h.c., H. Collins.

Six 1-lb Sections (novices only).—1st, Mrs. Collins; 2nd, C. Saunders; 3rd, Mrs. Burnett; h.c., C. J. Burnett.

Six 1 lb Jars Extracted Honey.—1st, H. Clues; 2nd, E. Thompson, Moulton; 3rd, G. Hickman; v.h.c., Mrs. Collins.

Super of Comb Honey (glass or wood).—1st, Mrs. Burnett; 2nd, C. Saunders; 3rd, Miss Burnett.

SPECIAL PRIZES.

Single 1 lb. jar extracted Honey (open class).—1st, James Kerr, Dumfries N.B.; 2nd, W. Patchett, Calbourne, Lincs.; 3rd, H. M. Saunders Thetford, Norfolk; 4th, W. J. Cook, Market Rasen; 5th, O. Orland, Flore; v.h.c. G. N. Coles, Chipping Norton.

Single 1 lb Jar Extracted Honey (open class, Special).—1st, F. G. Hillier, Andover; 2nd, S. G. S. Leigh, Broughton, Hants; 3rd, H. M. Saunders; 4th, W. J. Cook; v.h.c. W. Patchett, h.c., W. F. Trineman, St. Stephens by Saltash.

Super of Honey (Baroness Burdett Coutts' Prize Hive).—1st, O. Orland; 2nd (by the Association), W. Allen, Kingsthorpe.

Honey Cake.—1st, Miss Nellie Burnett, Langham Place; 2nd, Mrs. C. J. Burnett; 3rd, Mrs. Facer, Louisa Road, Northampton; 4th, Miss Burnett, v.h.c. Mrs. Hefford, Kingsthorpe.—(*Communicated.*)

NORTH NORFOLK B.K.A.

ANNUAL SHOW.

The annual show of the above association was held in Lord Hastings' park, Melton Constable, on Bank Holiday. Favoured by the beautiful weather, crowds came from the villages to enjoy the flower show, cricket match, and sports provided for their entertainment, and many found a great attraction in the well-arranged honey tent with its 137 exhibits, and the lectures given in the demonstration tent.

Mr. T. I. Weston officiated as judge of honey, etc., and made the following awards:—

Twelve 1-lb. Sections.—1st E. Robb, Outwell; 2nd, W. J. Norman, Harpley; 3rd, J. D. Softley, Massingham.

Twelve 1-lb. Jars Extracted Honey.—1st, J. D. Softley; 2nd, W. J. Norman; 3rd, Rev. A. Downe-Shaw, Kettlestone.

Six 1-lb. Sections.—1st, J. Graveling, Thornage; 2nd, A. Chesney, Bale; 3rd, S. Mayer, Hemblington.

Six 1-lb. Jars Extracted Honey. — 1st, S. Smalls, North Creake; 2nd, Rev. A. Downe-Shaw; 3rd, J. Mayer.

Beeswax.—1st, J. Nicholls, Shipdam; 2nd, Rev. A. Downe-Shaw; 3rd, J. Smalls.

Twelve 1-lb. Sections (Open).—1st, W. J. Norman; 2nd, W. Fake, Massingham.

Twelve 1-lb. Jars Extracted Honey (Open).—1st, W. J. Norman; 2nd, W. Fake; 3rd, W. Towler, Edgefield.

Single 1-lb. Jar Extracted Honey.—1st, W. J. Norman; 2nd, S. Smalls; 3rd, W. Patchett; 4th, J. Smalls.

Single 1-lb Sections.—1st, H. W. Saunders, Thetford; 2nd, E. Robb; 3rd, J. Mayer; 4th, W. J. Norman.

Baroness Burdett-Coutts' prize hive for *Best Three 1-lb. Sections and 3 lb. Extracted Honey* (agricultural labourers only).—B. Bennett, Bale.

Challenge Cup.—Best Exhibit in Show. —E. Robb, Outwell, for twelve 1-lb. sections.

Mr. T. I. Weston also held an examination of candidates for the third class expert's certificate of the B.B.K.A.

CAPPINGS OF COMB.

By L.S.C., Ilkley, Yorks.

Wasps (p. 303). — It is true that cyanide of potassium in a confined space will kill wasps, but wasps die hard, and it seems almost incredible that they should die as the *result* of simply passing over a lump of it. It is not surprising that there should be an increase in these creatures, for two years have been unfavourable to them, and the result of this has been that only the hardiest have survived, and these have interbred, so that out of adversity the race has triumphed. We may expect a further increase next year. I am not

sure if we ought to call them "pests," for they do an enormous amount of good. An excluder zinc porch or a swarm-catcher will protect a hive from the ravages of the largest species.

Packing Hives for Travelling (p. 303). —I have adopted a very neat and simple ventilating device, given to me by Mr. Shepherd, and which, I believe he now supplies. This consists, roughly, of a removable screen front, which will give almost any entrance up to 1½in. deep, and will close entirely upon reversal. I have modified it somewhat, and find it most satisfactory. A little later I will describe more fully than is here possible a simple packing device which has taken my stocks to the moors this year with absolute safety, and the minimum of labour in packing.

A Swarming Incident (p. 304). — "D. M. M." has uncapped this comb so well (p. 312) that I will only extract it. I was just ready with the knife, though! These useful "tips" ought not to be forgotten. Use is the best tag for memory! Curious how doctors differ about swarming as a virtue or a vice. It has been the salvation of the race of bees, and has its definite uses to-day, and we cannot get rid of the propensity—*even if we would*—all in five minutes!

Selected Queries (p. 305).—For cleaning up sections I use a three-frame nucleus box, with side entrance, tied in front of an ordinary hive, partly closing the entrance. The bees of the stock have free access, and I find it invaluable for this work, the whole of which is done rapidly and with no disturbance. Any one stock may be stimulated or fed in this way.

Blank Cartridges (p. 311).—Now isn't that real nice of "D. M. M."? His welcome is very welcome indeed, and I feel quite warm towards him. But I am bound to train my friendly guns upon him. It is only right to explain that my cartridges are *all* blank, and are not really intended to wound or destroy. After all, it is better to fire blank cartridges than to miss the target with ball. Might hit a beehive, instead of a bull! Mine are light manœuvres, and I only fire off the ammunition which is served out to me. But I avoid the use of smokeless powder in my willingness to indicate my position for such reprisals as I deserve.

Between ourselves, they are really "smoked cartridges," and are intended to induce the human bees to dip once more into the filled combs.

"Shot No. 1 " (p. 311).—I think "D. M. M." has right on his side. I wrote admittedly from memory alone, and this is just the kind of comment and correction my criticisms are intended to draw, if possible. Thank you, "D. M. M.," I will look the matter up again in "Gleanings."

Shot No. 2.—I am not convinced! "Strong nuclei" lots does not go down well—anyway, it is badly expressed. Even with explanation it only becomes "a strong collection of nuclei." Why does not "nucleus lots" express the present intention?

Shot No. 3.—I stick to my guns, blank cartridge or not! As it does not yet appear reasonable to me, all the old bee-books in existence will not make me believe that a failing queen can be the cause of swarming if *other favourable conditions* are not present. I maintain that if swarming occurs it is due to these other conditions, and the presence of cells is only coincidental—accidental, if you like. *Usually*, however, a failing queen is superseded, and the virgin allowed to hatch before her death. A very strong lot might conceivably send off a swarm with the first *virgin queen*; but I have had no such experience, and, anyway, this was not "D. M. M.'s" intention. That the feeding of the queen has a good deal to do with the laying is well known, but a young queen will do better than an old one under unfavourable conditions. She simply must lay eggs, so that it is not "all a matter of feeding." If "D. M. M.'s" facts are correct, and my partly playful theory of more efficient stoking on the part of the bees (who have, by the way, nothing but the queen to feed for nearly a week after swarming), it is unacceptable to our friend. Perhaps he will think it over, and give us a more reasonable solution.

Spring Dwindling (p. 312). — Is not this due to some of those failing queens which swarmed the year before? Better have them superseded in future, "D. M. M.," dear. BANG! Another blank!

Obituary.

DEATH OF MR. JOHN STONE.

We deeply regret to announce the death of Mr. John Stone, of Cubley, a well-known bee-keeper, and one of the oldest and most respected members of the Derbyshire B.K.A., which took place suddenly at his residence on Tuesday, July 24. It appears that in the early morning of that day Mr. Stone was in his usual health, but later on became unwell, and passed away shortly after noon. We have been favoured by the hon. sec. of the Derbyshire B.K.A. with the following particulars regarding the deceased gentleman, which will be read with interest by many bee-keepers outside the county where he was so well-known; nor do we doubt that readers generally will join us in tendering our sincere sympathy to Mrs. Stone and the family in their bereavement.

Born in the year 1843, Mr. Stone com-

menced early in life to take an interest in farm work, being employed in the same village in which he afterwards commenced farming on his own account.

His connection with bee-keeping extends back for a period of twenty-five years, during which time he has taken the keenest interest in the pursuit, not only as an ardent supporter, but as a very active member of the committee of the county association.

As an exhibitor he was one of the most successful of Derbyshire bee-keepers, having won numerous gold, silver, and bronze medals and other prizes at the county shows. He was also the first member to win the silver challenge cup (presented by J. L. P. Barber, Esq., J.P., Chairman of the Association), and having won it three years in succession it was decided that he should hold the cup as his own. Mr. Stone then kindly presented a similar cup to the Association to be competed for as before.

Mr. Stone's apiary, at the time of his death, consisted of forty eight stocks, including seventeen swarms hived this season. He had for a number of years officiated as judge at local flower shows, where classes for bees and honey were included; indeed, he held appointments to officiate at three coming shows to be held during the present autumn season.

But in addition to his keen interest in bee-keeping, he also found time for other pursuits, taking a special pride in his garden and its products, and all horticultural work. In this connection he was awarded several prizes at various horticultural shows during the last few years, receiving, among other awards, the champion ship certificate for horticultural work given by the Derbyshire County Council Technical Education Committee. He also secured the second-class certificate of the St. John Ambulance Association, and in addition held the office of churchwarden of his parish for fourteen years, besides being for many years school manager.

THE LATE MR. JOHN STONE.

Mr. Stone was married twice, and leaves a widow, two sons, and three daughters to mourn his loss.

The funeral took place on Friday, July 27, at Cubley, and was attended by many sympathising friends and neighbours of the deceased gentleman, the Derbyshire B.K.A. being represented by the hon. sec., Mr. R. H. Coltman.

Correspondence.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper We do not undertake to return rejected communications.

NOTES BY THE WAY.

[6397.] The fine weather still continues, and being combined with a high temperature the bees are still busy at work; though not adding much in supers they are storing up a future supply of food for the winter months. This is cheering to the busy bee-man, as it will later on save labour and cash, two items of moment, especially as our season is not quite up to the average.

As soon as the bees are kept at home by a change of weather, and a slackness of work is observable, see that all entrances are contracted; this will reduce the chances of the persistent robbing so often rife at the close of the season's work. But should "robbing-out" set in or show itself as starting, deal with it at once by giving a good sprinkling to all hives with the watering-can; then close the entrance of the hive being robbed with a piece of perforated zinc till the evening. Then, should any doubt exist with regard to the health of colony, destroy the bees (both robbers and victims) and strain the honey. But if the combs are seen to be good and the colony healthy, though weak (as it is only weak lots which fall a prey to the robbers if entrances are normal), procure a strong lot of driven bees and unite them to the weak lot, after first removing the queen. Do not run any risks by leaving the new and old queens to "fight it out," or you may still have the old queen left. Use the flour dredger as a pacifier when uniting.

I notice our friend "D. M. M.'s" remarks on queen rearing, and am not going to contradict him; the demand for queens in this country would not in my opinion pay to produce them in great numbers on spec. I know of one who raised a larger number than usual, and at end of the season had to kill off about one hundred queens. There was no demand, although advertised every week, and the party in question was a good bee-keeper and breeder to boot. I myself do not rear many more than I require, though I give every attention to their quality; and I generally have enough to supply all demands for "ye olde Englishe bee." We have not, so far as I know, any "faddists" in our near neighbourhood to go in for all and sundry foreign or prettily marked bees, therefore I am able to keep my stock about as pure as it was twenty years ago. My bee-man at our out apiary said to me last year: "That end hive, Mr. W., is the most vicious in the whole apiary," and on critical examination I found one or two bees slightly lighter in their markings than ordinary. I at once killed the queen, and this year the colony has been one of my gentlest (one of my own 1905 queens was introduced), and one of my best stocks this season.—W. WOODLEY, Beedon, Newbury.

LONDON v. PROVINCIAL SHOWS.

[6398.] It is dangerous to meet the lion in his den, but, I fear, far more risky to face an Editor in his *sanctum*. And yet we bee-keepers so regard our joint editors as guides, counsellors, and friends that one is almost emboldened to ask if you really mean all that a man from the country would imply from your note in "Honey Samples" to "C. L. (Lincs)" in this week's B.B.J.? (page 320). Some of us have never visited a big London show, while you have ample experience of both London and country shows. You give such publicity to "open classes" in your column, "Shows to Come," that it may almost be expected that many of our best country shows may secure entries from some of our best producers, and I surmise that most of these producers are not in London, but in the country. It may reasonably be considered that the average exhibits would be much higher in character in the London shows; but would not, here and there, some of the best honey be staged in the country? Without the invidiousness of mentioning our best-known exhibitors, your columns testify to their getting a good share of prizes in the country. Some of our West Country prizes have even gone to Lincolnshire, as well as Hants, Berkshire, and other counties. One of my greatest pleasures in the enjoyment of the fun of going round the show after judging—to see where the prizes have fallen—was experienced last week, when I found that the first prize winner in the "novice" class had also taken 1st in the "open" single pound class. I am certain, from careful reading of the JOURNAL for nearly twenty years, that you would never discourage a painstaking novice from hoping to attain the highest honours. And even the note now referred to is encouraging to the inquirer.

If I trespass, please forgive me; if you look with kindly tolerance on my remarks please accept my thanks.—S. JORDAN.

[We are glad to have the views of our friend, Mr. Jordan, plainly put in the above communication, for several reasons.

First, it affords us an opportunity for saying that the advice given on page 320 was prompted by the wisdom with which he too generously credits us. Moreover, we hope that readers will take it to heart in its fullest sense, as being fully justified by our own experience. We receive many scores of samples of honey every season, sent by zealous bee-men desirous of winning at our London shows, and whenever a sample reaches us good enough in quality to stand a chance at a metropolitan show we invariably advise this being sent up. But—and "here's the rub"—it will be found that at these shows the great majority of the exhibits have already won prizes elsewhere. This knowledge has been brought home to us forcibly after many years' experience as judge at metropolitan shows, and it is our appreciation of the confidence reposed in our opinion by those who ask for advice that impels us to make the distinction referred to.

We are very pleased to see that our correspondent, and several other capable men we could name, are making their way to the front rank as judges at important provincial honey shows; nor do we doubt that all older hands will regard it as a hopeful sign for the future of the craft when men of the right stamp are forthcoming to take the places of older ones, whose share of the work is nearing its end. Nor do we doubt that most of them are inspired with an honourable ambition to take a share of the labour of judging in London when we may hope to welcome them as colleagues. But we can promise them a tough task in re-judging their own awards made at previous shows; indeed, we are inclined to doubt their enjoying "the fun of going round the show after the judging, to see where the awards have gone," as Mr. Jordan jocosely puts it, if he finds that he has placed Smith first and Brown nowhere in London, while the positions have been exactly reversed by himself at a previous show in the country.

This is what makes judging, as well as prize-winning, a very difficult task in London compared with the provinces, and we hope justifies our making a difference between the two as stated in the reply on page 320.—Eds.]

ROSS-SHIRE BEE-NOTES.

[6399.] Unless the weather of August quickly changes for the better, 1906 will scarcely rank as a record season. True, I took 140 lb. of sealed honey from a single hive last week, but this is quite exceptional, none of those worked for sections being likely to give more than three racks—from clover, at least. The removal of supers from the above hive revealed a population so enormous that eleven frames and two racks of sections would not hold them, so more room was given, and the bees now occupy over eighty sections.

We have so far had only three good bee-days this month; most of the time it has been too wet or cold for work on the heather; but we still hope things will improve, and the purple hills furnish a fair crop of luscious honey, as they used to in past years. As a result of the indifferent season, sales are easily made. Good clover sections are selling freely at 9s. per dozen, and the prospective heather crop is in anxious demand at any reasonable price. With no glazing or railway carriage to whittle down the profits, the above price is decidedly satisfactory.

Our Southern friends who wax wrathful over the iniquity of those who advertise honey at about the price of sugar-candy would, in my opinion, do well to ignore the "dumpers," and concentrate all energies on opening-up trade at home.—J. M. Ellis, Ussie Valley, N.B.

THE SWARMING SEASON IN BERKS.

[6400.] This certainly has been a swarming season, in this district of Berkshire, at any rate, notwithstanding the pronouncement of our friend, "D. M. M.," in the "B.K. Record" for this month. I know at least three persons who could have supplied him with all the swarms he needed had he applied in the swarming season. Apropos of "checking swarms," I fancy it would be somewhat risky sometimes to exchange the hives of a strong and weak colony.

Hiving a swarm on "starters" only has not been a complete success with me this season, but as the swarm was only a moderate one I hope to test the point next year, and then with a rack of sections supered. It seems feasible that this practice will be more successful. By the way, I venture to think many are eagerly awaiting the promised paper by your contributor, whose initials appear above. His papers are not only interesting and interesting and instructive, but there is a breeziness about his writing which reminds one of the true "ling" or Scotch heather. Albert Sandys, Abingdon, August 7.

HONEY IMPORTS.

The value of honey imported into the United Kingdom during the month of July, 1906 was £3,821.—From a return furnished to the British Bee Journal by the Statistical Office, H.M. Customs.

Queries and Replies.

[3381]. *Making Artificial Swarms.*—About a year ago, on getting possession of "Cowan's Guide Book" (1881 Edition), I read it and became intensely interested in bee life. I have since read other books—with much profit—including the latest edition of Mr. Cowan's book. I have not been satisfied with the theory merely, and a few weeks back I became the happy possessor of two stocks of bees. I was anxious to increase my hives, but as neither of the stocks appeared likely to swarm I naturally ventured to do it artificially on Saturday, July 21. I followed as closely as I understood the instructions in "Guide Book," as directed under the heading "Making three Colonies from two." I shall appreciate your views in B.B.J. as to whether it is likely to be a success. My procedure was somewhat as follows:—I prepared a new hive (call it No. 3), placing in it three frames of empty comb and two of foundation. I next took from hive No. 1 five frames of brood and honey, shook all bees back into stock-box, and then placed these frames in No. 3; after covering all up, I placed feeding bottle, with syrup, above the frames; then I removed hive No. 2 to about four yards away, and placed No. 3 where it stood. Soon the alighting board of No. 3 was crowded with bees, and, examining the inside a little later, I found bees gathering on combs nicely. I then placed three frames with built-out combs and two with foundation into hive No. 1 to replace; apparently everything is going satisfactorily in this hive. Being quite a novice, having only seen a bee-keeper one day at work, I ask (1) Did I do rightly as above? Hive No. 3, of course, is without a queen, but I noticed that on the frames inserted there were three queen-cells half built. I would also be glad to know (2) will the bees in hive No. 3 raise their own queen and use these queen-cells? (3) If so, how soon should I expect the new queen to commence laying? (4) When ought I next to examine this hive? I should add a line to say the next day after operating, a large number of dead and dying bees were seen lying in front of hives. (5) Is this the result of fighting, or would it be possible that I had used the smoker too freely?—T. L., Penge, S.E.

Reply.—1. Quite right, so long as you were sure of there being *eggs* in addition to brood and honey in the combs removed from No. 1 hive. 2. Yes. 3. A queen usually begins to lay from six to ten days after hatching out if she is fortunate in getting quickly mated; but this period may be considerably extended by various circumstances over which the bee-keeper has no control. 4. Not till the bees are seen to be carrying in pollen freely. 5 The killing of bees will have arisen from your inexperience in such operations.

[3382]. *Curious Use of Comb-Cappings by Bees.*—The enclosed piece of comb was taken from a hive with frames hanging parallel to entrance, at the back of which I had thrown a quantity of comb-cappings after frames had been through the extractor, for the bees to clean up the wet cappings. I may say the lower part of all the twelve combs in the hive are treated in similar fashion to the small piece sent. Will you kindly give your opinion with regard to it? Do you think that the bees are kneading these wax particles and placing them on combs in the way shown ready for the capping-over process when fitted with food?—"Apis-Amateur," Bristol, August 10.

Reply.—We cannot think that the bees had any such object as you suggest when treating the comb as seen in sample. The way in which they deposit their food in cells for future use entirely does away with your view, because the bee must have access to the base of a cell before beginning to regurgitate the contents of its honey sac, and in some cells of sample the opening left is so small as to prevent this entirely. To see combs treated as shown is quite new to us, the added surface seen being easily discernible from its light colour, compared with the very dark old comb in the frames.

[3383]. *Dealing with Suspected Combs.*—Would you please say if there is any disease in the enclosed sample of comb? I have been a bee-keeper some time without ever having seen foul brood, but I am anxious to nip it in the bud if present. The perforated cells containing the white grubs made me doubt whether it was altogether healthy.—J. M., Mansfield, Notts.

Reply.—There is no disease visible in comb sent. All brood in sealed cells has reached the imago stage, and some of the young bees were alive when comb was examined, but the very strong odour of carbolic acid makes it probable that the bees have deserted the brood, and that there has in consequence been insufficient warmth for enabling the young bees to hatch out. Another possibility is that the hatching brood has been killed by the fumes of carbolic acid.

Bee Shows to Come.

A nominal charge of 2s. 6d. is made for notices (not exceeding 7 lines) in this column, 10 lines charged 3s. 6d. up to 15 lines 5s., which covers cost of insertion from order till date of show. Cash should accompany orders for insertion.

August 17. — In Public School, Portwilliam, Wigtownshire.—Honey Show in connection with the Horticultural Society.

August 18, at Borgue, N.B.—Honey and Flower Show, to be held at Borgue, Kirkcudbright, N.B. **Entries closed.**

August 22 and 23, at Shrewsbury.—Annual Show of the Shropshire B.K.A. in connection with the Horticultural Society's Great Floral Fête in "The Quarry," Shrewsbury. **Entries closed.**

August 24, at Exeter.—Annual Show of the Devon B.K.A., in conjunction with the Devon and Exeter Horticultural Society. The Baroness Burdett-Coutts' prize, hive for the best exhibit shown by cottager members, Dr. Philpott's prize of £1 1s., for the two best sections of comb honey. All open classes. Schedules from the Hon. Sec., A. S. Parrish, Heavitree Road, Exeter. **Entries close August 18.**

August 25, at Barnton, Cheshire.—Honey Show in connection with Floral and Horticultural Exhibition—two country, and six local classes for honey and wax. Cheshire B.K.A. silver medal to winner of 1st prize for county honey. Schedules from

F. Hindley, Hon. Sec., 88, Runcorn Road, Barnton, Northwich. **Entries close August 18.**

August 28, at Cartmel, near Grange-over-Sands.—Show of Honey, etc., in connection with the Cartmel Agricultural Society. Schedules from William Cragg, Secretary, Cartmel, via Carnforth. **Entries close August 16.**

August 29, at Chester.—Cheshire B.K.A. Show in connection with the County Agricultural Society. Open classes for Hives, Observatory Hives, Sections, and Extracted Honey. Baroness Burdett Coutts' prize hive for best exhibit shown by cottager member. **Entries closed.**

August 29, at Forbury Gardens, Reading.—Honey Show of the Berks. B.K.A. Schedules from the Hon. Sec., D W. Bishop-Ackerman, 161, King's Road, Reading.

August 30, at Montgomery.—Honey Show in connection with Horticultural Exhibition. Two open classes for six 1-lb. sections and six 1-lb. jars extracted honey. Prizes, 10s., 5s., 2s. 6d. Entry fee, 1s. each class. Schedules from Mr. W. J. Jones, Secretary, Montgomery. **Entries close August 23.**

September 1, at Bramhall, Stockport.—In the grounds of the Bramhall Hall. Honey Show—under the auspices of the C.B.K.A. Liberal prizes. Low entrance fees. Open and Local (three mile limit) Classes. Schedules from John Sibson, Hawthorn Grove, Bramhall. **Entries close August 24.**

September 8, at Dumfries.—South of Scotland B.K.A. 14th Annual Show of Honey, Bees, and Appliances. Five open classes—viz., three 1-lb. jars, three 1-lb. sections, and for single jar and section (free entry), and cake of wax; also handsome money prizes and valuable medals, for members only. Schedules from Jas. Johnstone, Sec., Nelson Street, Maxwelltown. **Entries close September 1.**

September 11, at Blenheim Park, Woodstock.—Annual Show of the Oxfordshire B.K.A. Open classes for single 1lb. section, and for single 1lb. jar Extracted Honey, with free entry. First prize, 10s.; 2nd, 5s.; 3rd, 2s. 6d. H. M. Turner, Hon. Sec., 4, Turl Street, Oxford. **Entries close September 6.**

September 12 and 13, at Edinburgh.—Thirteenth Annual Exhibition of Midlothian B.K.A. in Waverley Market. Open classes for six sections heather, six sections flower, six jars heather, six jars flower. Prizes, 15s., 10s., 5s. Entry, 2s. per class. Schedules from W. Weir, Heriot, Midlothian.

September 13, at Castle Douglas.—Honey Section, Dairy Show. Liberal prizes. Five open classes—viz., three 1-lb. jars, three 1-lb. sections, single jar, single section, and for cake of beeswax. Schedule from Jas. Johnstone, or from L. Aird, Hardgate Schoolhouse, Dalbeattie. **Entries close September 1**

September 8 to 15, at the Agricultural Hall, London.—Honey Show in connection with the Confectioners', Bakers', and Allied Traders Annual Exhibition and Market. (See large advertisement on page i.) **Open to all British Bee-keepers.** Entry fee in each class one shilling. Schedules from H. S. Rogers, Secretary, Exhibition Offices, Palmerston House, Old Broad Street, London, E.C.

September 20, 21, and 22, at Crystal Palace.—Surrey B.K.A. Annual Exhibition of Bees, Honey, Wax, and Appliances, etc. Twenty-six classes (ten open to all). Increased prizes and medals. Schedules from F. B. White, secretary, Marden House, Redhill, Surrey. **Entries close September 7.**

September 22 to 29, at the Agricultural Hall, London.—Honey Show in connection with the Twelfth Annual Exhibition and Market of the Grocery and Kindred Trades. Nearly £50 in prizes for honey and beeswax including four prizes of £4, £3, £2, and £1, in honey trophy class. **Open to all British Bee-keepers.** Schedules from H. S. Rogers, Secretary, Exhibition Offices, Palmerston House, Old Broad Street, London E.C.

September 26, at Altrincham.—Show of Honey Products, in connection with Altrincham Agricultural Show. Open to United Kingdom: Classes for Hives, Observatory Hive, 12 Jars Extracted Honey. Open to County of Chester only: Classes for Trophy, Amateur-built Hive, Two Shallow Bars, 12 Jars Run, 12 Sections, Wax, etc. Special classes for cottagers. Special classes for Society's district. Liberal prizes. Low entrance fees. Schedules from Mr. J. H. Hall, 2, Dunham Road, Altrincham. **Entries close September 9.**

October 9 to 12, at the Agricultural Hall, London.—Show of Honey and Bee Produce in connection with the British Dairy Farmers' Association. Numerous and liberal prizes for honey, etc., including the valuable Silver Challenge Cup of the B.B.K.A. Schedules from Mr. Wm. C. Young, Secretary, 12, Hanover Square, London, W. **Entries close September 12.**

Notices to Correspondents & Inquirers.

W. Hambrook (Sittingbourne).—Bees Deposing Queens.—From the particulars given it seems quite certain that the queen of the colony was being deposed by the bees themselves, and under these circumstances it is not at all uncommon to find a young queen hatched out and mated before the old mother-bee is killed and cast out. Indeed, cases have been known where the old and young queens have been living peaceably together for several weeks before the end came.

Gwenywfa (Ruthin).—Bees Removing Honey from Skeps into Sections.—It is not at all certain that the bees will remove honey into shallow-frames or to sections from skeps, the probability being that they will store it in the body-box if left in the hive. 2. The queen sent is apparently a virgin, and it appears as if she had been starved to death. 3. The queen-cage is a poor one.

John Roberts (Ruabon).—Driving Bees from Skeps.—As you have the "Guide Book" by you, we need only refer you to pages 158, and 159, where full information will be found, with a page illustration of "Driving Bees."

A. K. M. (Spalding).—Bee Nomenclature.—The condition of dead queen sent makes it impossible to judge definitely with regard to pure race or variety. All pubesence (or hairiness) is gone from the abdomen, apparently from the queen having been "balled." We may, however, safely say that it is a pure Ligurian or Carniolan, but a hybrid of some sort.

Suspected Combs.

J. McG. (Ayrshire).—There is no foul brood in comb. Since the stock is strong in bees and headed by a young queen, we advise treating it as a case of chilled brood only. "Pickled brood," as it is termed in America, is quite different to yours, and it is more than probable that the colony will go on all right now you have a young queen at its head.

Amateur (Yorks, W.R.).—Bad case of foul brood.

Disappointed (Leicester). — Piece of new comb (never bred in), contains nothing worse than freshly-gathered pollen and honey.

Honey Samples.

P. W. (Southport). - Your sample appears to have been collected from tree-blossom infested with aphis, or green fly. It is not at all suitable for table use. There is nothing unusual in the contents of two supers on one hive being quite different in quality

from each other, or the fact of bees working on different flowers at the time each super was being filled.

(Mrs.) A. T. K. (B'ham).—Sample is contaminated with honey-dew, and thus rendered impalatable for table use.

R. A. (Bicester).—The light-coloured sample is very good indeed. It is granulating with a nice grain and of good colour. The dark sample is, of coarse flavour, thin and poor in quality.

TYKE (Northants).—Honey sent is nauseous in flavour and aroma. Not at all fit for table use. You are probably right in supposing it t obe from "ragwort," or ragweed.

**** ***Some Queries and Replies, &c., are unavoidably held over till next week.***

Special Prepaid Advertisements

Twelve words and under Sixpence: for every additional Three words or under, One Penny.

DRIVEN BEES, 1s. 3d. per lb.; young Queens, 1s. 6d.; boxes returnable.—BROWN, Somersham, Hunts. s 18

HEALTHY DRIVEN BEES, with young 1906 Queen, 5s. per lot; package not returnable. Put on rail same day order is received.—W. D. T. RICHARDS, Postman, Kingswinford, Dudley, Worcester. s 19

HEALTHY DRIVEN BEES, headed by 1906 Queens, f.o.r.; package free; 5s. lot.—BROWN, Expert, King Street, Wellington, Salop.

FINEST ENGLISH HONEY, 15s. per 28lb. tin; sample, 2d.—DUTTON, Terling, Essex. R 80

YELLOW CROCUSES, slips Arabi Alpinus, 100 1s. 3d., free.—BRAYSHAW, Aultmore, Keith. s 17

DRIVEN BEES, delivered, 5s. 6d.; Queens, 3s.; four-frame Nucleus, 12s. 6d.; Section Glass, 2s. gross.—70, Highgate Road, Birmingham. s 16

GOOD GOAT, full milk; also lady's bicycle. Exchange for driven bees.—W. GEE, Ware Road, Hertford. s 15

DRIVEN BEES, a good supply, strong healthy lots, with 1906 Queens, 5s.; natural raised laying Queens, 2s. 6d.—T. BRADFORD, Expert, 68, Droitwich Road, Worcester. s 13

PURE ITALIAN 1906 QUEENS, from selected stocks, 5s. each; satisfaction guaranteed.—H. POTTS, Expert, Dutton, Preston Brook, Warrington s 14

GOOD HONEY, 28 lb. tins, 6d. lb.—GEORGE THOMPSON, "Beecroft," Helpringham, Lincolnshire. s 12

WANTED, BEE APPLIANCES in exchange for ONE TON of GOOD HONEY; or would sell in any quantity to suit purchaser.—For price and sample (2d.) apply T. STAPLETON,, Gwinear, Hayle, Cornwall. s 11

FOR SALE. DRIVEN BEES; 1s. 6d. per lb.—J. WAYMAN, Cottenham, Cambridge. s 10

FOR SALE, NEW BELL GLASS SUPER, to hold 10 lb. honey, nearly new; shallow frame super, for straw skep, with 10 frames and roof; two years' issue of B.B.J. What offers? or exchange Driven Bees. A. DOURING, Bank Street, Mexborough, Rotherham. s 9

QUEEN BEES, 1906, Carniolan Hybrids, 2s. each; fertile. REV. A. H. MAWSON, Uffington Vicarage, Shrewsbury. s 8

WANTED, exchange for healthy stock of driven bees, poultry, laying, to value.—HIGGS, Northrode, Congleton. s 7

FOR SALE, ONE STOCK OF GOLDEN ITALIANS, 30s.; two stocks Hybrids, 25s.—SAXELBY, Hall Green, Birmingham. s 6

STOCKS of BEES for SALE, singly or otherwise; moving.—WARD, Sudborough, Louth. s 5

FOWL RUN, covered with movable floor, boards bolted together (by Meech); also portable wire run, each 24ft. long; equal to new. Sell or exchange stocks of bees, bar frames.—NICHOLAS, Tyseley Hill, Acocks Green, Birmingham s 4

FOUR THREE-FRAMED NUCLEI, with 1906 laying Queens, 7s. 6d. each.—J. ADDYMAN, Knotfield Lodge, Horsforth, Leeds. s 3

QUEENS, 1906, (Sladen's strains), 4s. 3d.; three-frame nuclei, 10s.—PAUL, Salisbury Road, Bexley. s 2

BEES, from eleven healthy skeps, to drive early, 5s. per lot, on rail.—ARCHER, 64, Kingston Road, Oxford. R 99

EDISON HOME PHONOGRAPH and 35 records, new last year, extra large trumpet, cost £9 2s. 6d.; and Tamlin's 100-egg incubator, with self-supplying lamp, new last year, cost £3 15s. What offers in cash or bees and appliances?—Address F. SHARP, Bidwell, Dunstable, Beds. s 1

QUEENS, selected from honey-gathering stocks; Black English, fertile, 1906, 2s. 8d., free, in introducing cage; Nuclei four-frame, 10s.; brood combs, suit driven bees, 7d. each; driven bees, 1s. 6d. per lb. for 4lb. lots, packed free; now ready. Light honey, 30lb. tin 14s. 6d., 52s. 6d. cwt.; sample 2d.—CHARTER, Tattingstone, Ipswich. R 98

15 QUEENS from driven swarms, 2s. 3d. each; 12 for 22s., free; also 50 lb. beautiful clover and sainfoin honey, 25s., sample 2d. — NEWMAN, 117, Coldharbour Lane, S.E., and Windmill Farm, Chalfont St. Giles, Bucks. s 20

HEALTHY STOCKS, in good Standard Hives, 20s. each.—JARVIS, Coleford, Glos. R 85

ENGLISH-MADE HONEY JARS (1lb., screw cap), 15s. 6d. gross, two gross 30s.—JAS. DYSON, Stainforth, Doncaster. R 93

BEES of my hardy prolific strain of selected workers. 1906 tested Queens, 3s. 6d. Three-frame Nuclei, with Queen, 12s. 6d. Bees, 1s. 6d. lb., for 5lb. lots or over. Packages to be returned. Guaranteed healthy. Safe arrival.—WHITING, Valley Apiaries, Hundon, Clare, Suffolk. R 94

HEALTHY DRIVEN BEES, with Queen, 5s. per lot. Package returnable. — JOHN P. PHILLIPS, Spetchley, Worcester. R 92

HONEY, the usual quality, but supplies short, 56s. per cwt.; 28lb. tins, 14s. Sample 3d.—OWEN BROWNING, Ashley, Kingsomborne, Hants.

HONEY EXTRACTOR, 19s. 6d., cost 25s.; large WAX EXTRACTOR, 8s. 6d., cost 12s. 6d.; both new.—HEWETT, Laburnum Apiary, Alton, Hants.

QUEENS, choice fertile 1906, bred from my non-swarming stocks, 3s. each; immediate despatch.—TAYLOR, Hollyhurst, Boldmere Road, Wylde Green, near Birmingham. R 75

HEALTHY DRIVEN BEES, with Queen, 5s. per lot; also 1906 Queens, 2s. 6d. each; boxes returnable; 10th season.—A. R. MORETON, Expert, Hallow, Worcester. R 74

MEADOWS, Syston.—Clearance sale of extractors, observatory, hives, etc. Prices on application. R 72

IMPORTED ITALIAN QUEENS, 6s. 6d.; home-raised Italian and Carniolan, 5s.; British, 4s.; swarms—Nuclei or full Colonies. Fair prices.—E. WOODHAM, Clavering, Newport, Essex. R 59

DRIVEN BEES wanted; any quantity.—E. H. TAYLOR, Welwyn, Herts. R 61

Editorial, Notices, &c.

THE HONEY SHOWS OF 1906.

The time is now drawing near when the honey shows of 1906 will be things of the past, to be talked over by past masters in the art of showing with novices who have not only run the veterans close in the race for honours, but have frequently come in first. We venture to say that, in this connection, results such as we have in mind constitute one of the best features of our exhibitions. The experienced bee-man owning a hundred stocks has no advantage over the beginner with a few hives, so far as regards the quality of his produce. The bees of both gather nectar from the same flowers, and an intelligent bee-keeper, with the well-applied experience of a year or two, can stage his honey equally well with he who has been showing for twenty years.

This being so, and the fact of good honey being plentiful, we invite the attention of all who possess such to the important exhibitions to be held in London during the next few weeks, for which the dates of closing entries are near at hand. An opportunity is there afforded for securing honours well worth striving for, as well as very valuable money-prizes, which tend to sweeten the winner's success.

The exhibitions to which we refer are those to be held at the Agricultural Hall, the Confectioners' and Grocers', respectively, taking place first (full particulars of these will be found in the advertisement on page iii. of this issue). It will there be seen that exceptional advantages are offered to exhibitors of hives, honey, and beeswax, the entry fees being merely nominal, viz., one shilling for each entry. Other advantages are named in the prize schedule, which is sent free to all applicants.

Next comes the Surrey B.K.A. Show at the Crystal Palace, on September 20, 21, and 22, followed by the evergreen "Dairy Show," on October 9 to 12, for which entries close on September 12. These shows will be visited by many thousands of people, who will there see bee-produce at its best to the manifest advantage of all concerned.

We therefore urge those of our readers to whom the above remarks apply, to seize the opportunity afforded them of making a first appearance on the show bench of these important metropolitan shows. It is a chance not to be regarded lightly, and the samples of honey lately submitted to us for examination fully justify us in offering this advice, and saying that those who avail themselves of it will have no cause for regret.

HENBURY DISTRICT B.K.A

ANNUAL SHOW.

The eighth annual show of the above association was held in connection with that of the Horticultural Society, on Aug. 1, at Henbury, in a field kindly lent by Major-General Sampson-Way, C.B. The entries numbered 122, over 110 of which were staged. Messrs. Jordan, Brown, and Burtt officiated as judges, and owing to the keen competition and high quality of the exhibits had an arduous task in making the following awards:—

OPEN CLASSES.

Trophy of Honey.—1st, E. Hutton, Westbury-on-Trym; 2nd, Arthur Baker, Henbury.

Twelve 1-lb. Sections.—1st, C. W. Dyer, Compton Newbury, Berks; 2nd, E. C. R. White, Salisbury; 3rd, J. Coates, Bath; v.h.c., Jones Bros., Andover.

Twelve 1-lb. Jars Extracted Honey.—1st, W. Tremblin, Chipping Sodbury; 2nd, E. C. R. White; 3rd, Jones Bros.; v.h.c., C. W. Dyer; c., J. Coates.

Single 1-lb. Section.—1st, W. Pretty, Shirehampton; 2nd, J. Goodsell, Cranbrook, Kent; 3rd, J. Trebble, South Molton; v.h.c., E. C. R. White; c., C. Pike, Westbury-on-Trym.

Single 1-lb Jar Extracted Honey.—1st, E. C. R. White; 2nd, S. G. S. Leigh, Broughton, Hants; 3rd, Miss Edwards, Stamford; v.h.c., T. George, Henbury; h.c., E. R. Nash, Pluckley, Kent.

Beeswax.—1st, E. C. R. White; 2nd, Arthur Baker; 3rd, W. H. Pretty; v.h.c., E. Hutton; h.c., T. George; c., H. Jolly, Clifton.

Queen's Wasps.—1st, A. Denham, Henbury.

MEMBERS' CLASSES.

Twelve 1-lb. Sections.—1st, H. Jolly, Clifton; 2nd, T. George; 3rd, W. H. Pretty; v.h.c., C. Pike; h.c., E. Hutton.

Twelve 1-lb. Jars Extracted Honey.—1st, C. Vincent, Henbury; 2nd, E. Hutton; 3rd, W. H. Pretty; v.h.c., T. George; h.c., W. S. Moore, Patchway.

Six 1-lb. Sections.—1st, T. George; 2nd, C. Pike; 3rd, W. H. Pretty; v.h.c., E. Hutton; h.c., Miss Vera Waller, Westbury-on-Trym.

Six 1-lb. Jars Extracted Honey.—1st, Miss Vera Waller; 2nd, T. George; 3rd, E. Hutton; v.h.c., Arthur Baker; h.c., W. H. Pretty.

Three Shallow Frames for Extracting.—1st, W. H. Pretty; 2nd, Arthur Baker; 3rd, E. Hutton.

Three 1-lb. Sections.—1st, T. George; 2nd, C. Pike; 3rd, C. Vincent; v.h.c., Miss Waller; h.c., W. H. Pretty; c., W. H. V. Board, Henbury.

Three 1-lb. Jars Extracted Honey.—1st, E. Hutton; 2nd, W. H. Pretty; 3rd, C.

Vincent; v.h.c., T. George; h.c., Miss Lavington; c., Miss Waller.

COTTAGERS ONLY.

Three 1-lb. Jars Extracted Honey.—1st, M. Joyner; 2nd, J. Baker; 3rd, Mrs. Stagg.

Three 1-lb. Sections.—1st, Mrs. Stagg; 2nd, M. Joyner; 3rd, J. Baker.

NOVICES ONLY.

Three 1-lb. Jars Extracted Honey.—1st, W. H. Pretty; 2nd, J. Baker; 3rd, M. Joyner; v.h.c., W. H. V. Board.

Three 1-lb. Sections.—1st, W. H. Pretty; 2nd, M. Joyner; 3rd, C. Fry, Westbury-on-Trym; v.h.c., W. Greenslade, Westbury-on-Trym; h.c., H. George, Westbury-on-Trym; c., W. H. V. Board.

SPECIAL PRIZES.

Silver Medal.—W. H. Pretty (30 points).

Bronze Medal.—T. George (23 points).

There were lectures given during the afternoon by the County Council's expert, Mr. Burtt, who was unfortunately unable to manipulate the bees owing to the inclement weather.

J. Atkin Waller, Hon. Sec.

LEICESTERSHIRE B.K.A.

ANNUAL SHOW.

The annual show of the above association was held in connection with the twenty-first annual flower show at the Abbey Park, Leicester, on August 7 and 8. There was a large show of honey, the quality being excellent, owing to the exceptionally good season. Mr. Richard Brown, Somersham, officiated as judge, and made the following awards:—

Observatory Hive with Queen and Bees.—1st, S. Clarke, Leicester; 2nd, T. H. Geary, Leicester; c, A. Meadows, Market Harborough.

Twelve 1-lb Sections.—1st and Silver Medal, H. Dilworth, Shangton; 2nd, J. Waterfield, Kibworth; 3rd, T. H. Geary; h.c., F. Pickersgill, Withcote; c., W. W. Falkner, Market Harborough.

Twelve 1-lb. Jars (Light) Extracted Honey (North Leicester only).—1st, F. Pickersgill; 2nd, S. Spray, Melton Mowbray; 3rd, G. A. Hobbs, Leicester; h.c., J. G. Payne, Lutterworth; c., E. A. Jesson, North Kibworth.

Twelve 1-lb. Jars (Light) Extracted Honey (South Leicester only).—1st, W. Wesley, Desford; 2nd, H. Dilworth; 3rd, H. Hopkins, Enderby; 4th, J. Waterfield; h.c., J. Flavell, Leicester Forest West; c., Hy. Bradbury, Kirby Muxloe.

Twelve 1-lb. Jars (Dark) Extracted Honey.—1st, J. Waterfield; 2nd, H. Dilworth; 3rd, Mrs. W. Falkner, Market Harborough.

Three Shallow Frames of Comb Honey 1st, J. Waterfield; 2nd, W. J. Davey, Market Bosworth; 3rd, H. Dilworth; h.c., W. W. Falkner.

Display of Honey.—1st, J. Waterhouse; 2nd, W. P. Meadows, Syston; 3rd, T. H. Geary.

Six 1-lb.. Jars (Dark) Extracted Honey (novices only).—1st, J. Kenney, Cosby; 2nd, J. Flavell, Leicester Forest West.

Six 1-lb. Sections (novices).—1st, W. Spriggs, Shawell; 2nd, A. McVinish, Beaumanor.

Six 1-lb.. Jars (Dark) Extracted Honey (novices only).—1st, J. Kenner; 2nd, W. Monk, Ashby Magna.

Six 1-lb. Jars (Light) Extracted Honey (Baroness Burdett-Coutts' prize, for cottagers only).—1st, W. Wesley, Desford.

Honey Beverage.—1st, T. H. Geary; 2nd, S. Clark.

Beeswax.—1st. T. H. Geary; 2nd, Mrs. Waterfield, Kibworth.

Honey-Cake.—1st, Mrs. Waterfield; 2nd, T. H. Geary.

WORCESTERSHIRE B.K.A.

ANNUAL SHOW.

The Annual Show of the W.B.K.A. was held on Thursday, August 9th, at Madresfield, Malvern, in connection with the Madresfield Agricultural Show. The total exhibits numbered 63, slightly in excess of last year, and were of very good quality. Dr. Walpole-Simmons was again appointed judge, and made the following awards:—

Complete Frame-Hive for General Use.—1st, Geo. Richings; no other entry.

Twelve 1-lb. Sections.—1st, C. H. Haynes, Hanley Castle; 2nd, W. E. Hyde, Ledbury; 3rd, J. P. Phillips, Spetchley.

Six 1-lb. Sections.—1st, W. E. Hyde; 2nd, Miss G. Willan, Hanley Castle; 3rd, C. H. Haynes.

Twelve 1-lb. Jars Extracted Honey.—1st, C. H. Haynes; 2nd, T. Rouse, Tenbury; 3rd, W. E. Hyde.

Six 1-lb. Jars Extracted Honey.—1st, C. H. Haynes; 2nd, Geo. Richings; 3rd, A. R. Moreton, Hallow.

Six 1-lb. Jars (Dark) Extracted Honey.—1st, Geo. Richings; 2nd, C. H. Haynes; 3rd, T. Rouse.

Twelve 1-lb. Jars Extracted Honey (Cottagers only).—1st (hive presented by the Baroness Burdett-Coutts), W. E. Hyde; 2nd (hive, in flat, value 10s.), W. Vokins.

Single Shallow-Frame Comb-Honey for Extracting.—1st, J. L. Brierley, Worcester; 2nd, J. Toombs, Ledbury; 3rd, T. Rouse.

Beeswax.—1st, A. R. Moreton; 2nd, Miss Johnson, Guarlford.

Single 1-lb Section.—1st, J. Coates; 2nd, H. F. Jolly; 3rd, G. W. Kirby; 4th, S. Gibbs; v.h.c., Miss Hardwick, Portishead; h.c., J. W. Brewer.

Beeswax (open).—1st, L. E. Snelgrove;

2nd, B. J. Over; 3rd, G. W. Kirby; h.c., J. Brown.

Collection of Appliances.—1st, Brown & Sons, Bristol; 2nd, Ward & Co., Path.

Observatory Hive.—1st, L. E. Snelgrove; 2nd, G. W. Kirby.

Highest number of Points in Show (Challenge Honey Pot).—G. W. Kirby.

Baroness Burdett-Coutts Prize Hive (Cottager Members only).—S. Gibbs.

Three Shallow-Frames for Extracting. 1st, G. W. Kirby; 2nd, B. J. Over; 3rd, W. H. Pain, Bridgewater.

Beeswax.—1st, G. W Kirby; 2nd, B. J. Over; 3rd, C. Jones, Knowle.

Three 1-lb. Jars Granulated Honey.—1st, C. Jones, 2nd, G. W. Kirby, 3rd, S. Gibbs.

Six 1 lb. Sections.—1st, G. W. Kirby, 2nd, J. Coates; 3rd, J. W. Brewer; v.h.c. C. Jones, h.c. G. Tatham, Wedmore.

Six 1-lb Jars Extracted Honey.—1st, G. W. Kirby; 2nd, G. H Caffe; 3rd, W. Withycombe; v.h.c., C. Jones; h.c., S. Gibbs.

Honey and Confections.—1st, G. W. Kirby.

Three 1-lb. Sections (Novices).—1st, G. Tatham, Wedmore; 2nd, Miss Terrell, Clevedon; 3rd, C. Jones; v h c., M. Tilley, Wrington.

Three 1-lb. Jars Extracted Honey.—1st, C. Jones; 2nd, G. Tatham; 3rd, Miss Hardwick.—L. E. Snelgrove, Hon. Sec.

Correspondence.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper We do not undertake to return rejected communications.

AMONG THE BEES.

QUEEN REARING.

[6401.] As, just the other day (page 272), I wrote in commendatory terms of Mr. Sladen's book on queen rearing, and inferentially at least of his system, he might not have been the first to take umbrage at what I wrote in the issue of July 26. Inasmuch as I have made an exhaustive study of the subject, including Mr. Sladen's own book, I fail to see what force there is in his contention that I either wrote in ignorance of my theme, or entirely misrepresented this branch of bee-keeping. I repeat and emphasise my two chief assertions, viz., that we have very few who make a definite study of this interesting subject, and that even these few, as well as the many who simply *rear* queens, are flooding the country with "undesirable aliens." I had no thoughts of Mr. Sladen when I wrote my first paragraph, but ready to hand he supplies confirmation of the truth of both statements.

Open his "Queen Rearing at the very first page, and you will find the introductory words of his preface inform you that, originally written in 1904, it was necessary in 1905 to have it "entirely re-written." If the subject had been thoroughly understood, why should it be necessary to have it not only re-cast but re-written ten months after? Evidently from his own words Mr. Sladen had only then evolved from his pupilage as a queen rearer, and become a master in the art, as I acknowledge he now is. How many other queen rearers in the country, however, is he prepared to certify have shed their cocoons? Remember, I never said there were none. I simply expressed a doubt (and that only interrogatively) if there were many. On the second point Mr. Sladen's own advertisement is evidence, for he there advertises six or eight separate "strains" or races, supplying, I have no doubt, excellent queens. But that is not my point, which is the contamination of the pure native race and the resulting "mongrel crew." When we find, "selection by colour for the honey-producing character of our bees" recommended it puzzles me. I saw a resultant queen bred true to this test doing excellent work the other day, but I know of "goldens" (not from Mr. Sladen) described as "weeds": and worse, in four northern counties they are openly accused of introducing and disseminating foul brood. So it may be seen the subject is a thorny one.

Influence of Race.—About ten years ago a bee-keeper imported some Cyprian queens and crossed them with Carniolans, but finding them faulty he killed all these queens. To-day his bees show a cross varying from workers that might be taken for average blacks to almost pure-looking Cyprians. The blood runs on generation after generation, in spite of persistent attempts to breed it out. A Canadian bee-keeper, over twenty years ago, introduced Caucasian queens, and finding them "undesirables," has been trying ever since to extirpate all traces of the race, but it persists. It is a strange feature. Nevertheless we see it in animals and human beings. Distinctive traits and types crop up in families after slumbering, it may be, for generations, and the same holds good in apiculture. Therefore it behoves bee-keepers to pause and study over future generations, whose work may be handicapped by the carelessness of their forefathers.

The Bee Hives of Europe.—According to an American Consular report from Frankfort the total European production of honey is at present estimated to amount to 80,000 tons, at an approximate value of

from two to two and a half millions sterling. Germany leads in the production with 1,910,000 bee-hives, furnishing 20,000 tons of honey. Spain is next with 1,690,000 hives and 19,000 tons of honey. Austria-Hungary is third with 1,550,000 hives and 18,000 tons of honey. I am not prepared to certify that the above figures are correct. I simply record them. But the thought strikes me that if so some must have sold out *very* cheap, as the whole works out at about *threepence* per pound, so I sigh thankfully that I am not of either of these nationalities.

Space Below Frames in Winter.—Lately American bee keepers have taken to what they call deep-bottom boards, allowing a space of nearly an inch below frames in winter. More recently some, not satisfied with this depth, have increased it to two inches, and reports speak of "every hive fitted up in this way coming out clean, dry, and fit." The practice has been common in this country for many years, the inventor of the system being, I believe, our junior editor. Instead, however, of using a cumbrous bottom board (Anylin floor-board), he gives a space of three inches by means of an eke familiar to all who have seen illustrations of the "W.B.C." hive—and who has not? It is claimed that bees winter better with hives allowing this space, that the air is kept fresher and sweeter, that combs are drier and healthier, and that all débris, dead bees and other waste matter, is kept at a respectable distance from the cluster. I think the idea is an excellent one. The "eke" as designed by "W.B.C." comes in handy, too, in converting a shallow body into a standard one, while in spring, when removed from below, it makes an admirable space for accommodating additional packing above the brood-box when it is needful to conserve heat carefully.

Extracted.—The infinite superiority of Nature's handiwork over the finest work of man is clearly illustrated in the relative fineness of the point of a bee's sting and that of a delicate cambric needle. Under a powerful microscope the former is hardly discernible, while the latter appears to be about an inch in diameter and very coarse and rough in finish.

A naturalist who has a taste for the curious in science has recently made a series of experiments to test the strength of insects as compared with the strength of other creatures, and he finds that in proportion to its size a bee can pull thirty times as much as a horse.

The smallest number of bees that can carry 1 lb. of honey is 10,000, but it may require up to double that number, or 20,000, to carry that weight. One pound of bees may number 3,700, but it may take 5,500—with an average of 4,800. Drones, on the other hand, run from 1,800 to 2,000 to the pound.

There are 28.86 worker-cells and 18.47 drone-cells to the inch, but 28 and 18 will be found sufficiently near the mark in making any calculation.—D. M. M., Banff.

DRONE LARVA IN QUEEN-CELL.

BEES NIBBLING AWAY FOUNDATION.

[6402.] I am forwarding for your inspection a queen-cell that contains, in place of the queen, what I take to be a fine drone larva (nearly in the pupa stage). If this is a drone, it must have been reared in the same cell, which was one of six formed on one frame by the bees themselves. The cell in question was due to hatch two days before I cut it out, and as it did not hatch (the other five came all right), I opened the cap of cell to-day, to find (as I suppose) that the bees had made a curious mistake in doing their best to produce a queen from a drone-egg.

I have seen worker bees that have been reared in queen-cells (not recently). I put it down at the time as probable that the larva was too old to produce a queen when the cell was formed around it, or that it had not received sufficient royal jelly or attention in some way. I always open any queen-cells that are sealed over, yet fail to hatch properly, and have this day opened one that contained no larva at all, nor any sign of such. There was just a quantity of royal jelly, but no cocoon.

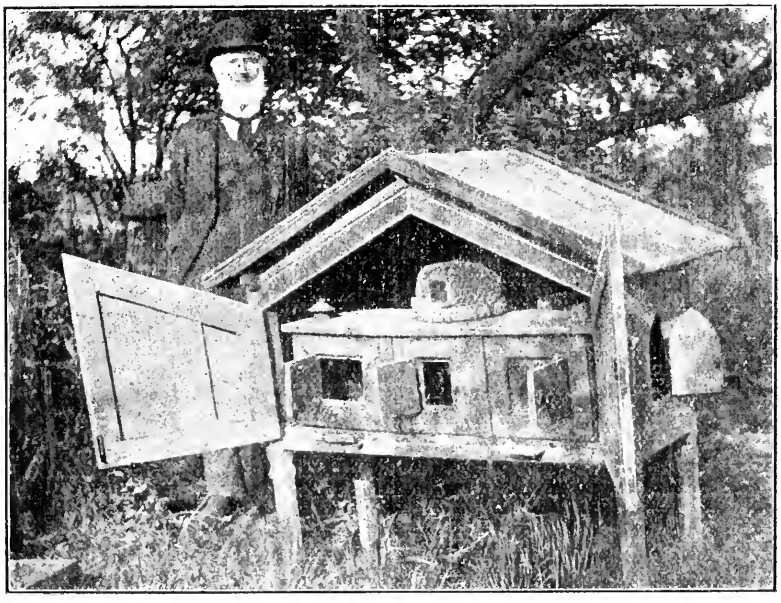
I think the bees do many things during the honey-flow in a way that they would not do in a less busy time.

Referring to the mention of bees carrying off foundation (6351, page 263). I may say that early in June I put a number of frames fitted with new sheets of foundation into an otherwise empty hive, on a stand in my bee-garden. Soon afterwards quite a number of bees were seen passing in and out of the entrance of the hive, which had been left open. I opened the hive, thinking a swarm might have taken possession unobserved, but found only fifty or sixty bees, all hard at work nibbling away small particles of the wax foundation, and carrying it away on their hind legs. I had often noticed that bees had nibbled away the foundation in the hives, but in this case they were gathering wax with a will.—E. W. CARBINES, Cardinham, Cornwall.

[The queen-cell received contained a drone larva which had nearly reached the pupa stage.—EDS.]

AN OCTOGENARIAN BEE-KEEPER.

[6403.] Quite recently I was talking to an old gardener, Clayton by name, aged eighty, who lives near my own apiary at Greenford. He was a very enthusiastic bee-keeper some years ago, but told me he was "afeared of bees now," and has not kept any for the past twelve years. He has taken many prizes at the Crystal Palace and elsewhere for honey in years gone by, but I was most interested in his hive, which I take to be a "Nutt's Collateral Hive." It was given to him fifty years ago, and the person who gave it had it many years before that, so it may be put down to quite 60 years old. As far as the interior is concerned it is still as sound as the day on which it was made, but now inhabited by spiders instead of bees. Thinking there must be a number of B.B.J. readers who, like myself, have never seen a collateral hive except in engravings, I took two photos of it, and herewith enclose them if you would care to make use of them in the Journal. From "Nutt's Book on the Management of Bees, 1835," which I have; apparently the swarm was put into the centre box, and when the stock increased and became crowded, the tin slides were drawn and the bees were given passage way to the right or left hand box, and also bell-glass supers were placed on top of centre box. There are still zinc ventilators, which you will notice in the photo, also place for thermometers and inspection windows. You will notice that the legs are nearly gone, and I had to prop the relic up to take a photo. What an elaborate entrance door, with its tinned and ornamental roof! It contrasts strangely with the present-day hive, built for utility. I suppose makers had more time in those days, and they turned out good work. You will observe the owner standing behind the hive. He is wonderfully hale and hearty, and is still able to, and does, a good day's work. Trusting this may be of interest to your readers.—B. E. Buckwell, Acton, W.



AN OCTOGENARIAN BEE-KEEPER.

WEIGHT OF SECTIONS.

[6404.] Referring to the letter of your correspondent, "East Sussex," in last week's "B.B.J." (6395, page 317), I was induced by it to turn up my old note-book, and from its pages I take the following record, which is, I fancy, "gey ill to beat," as we say in Scotland. In 1899 I sent six hives to the moors. On my first visit I find I took off eighty-four sections, weighing 95 lb. (nett weight, comb and sections only). I have not got the weight of the individual racks as removed, but find that when I packed the honey for sale 126 sections weighed 140 lbs. That year some of my sections weighed over 20 ozs., and were beautifully white and sealed level with the wood. Alas! never since that year have I been able to look upon such a lovely lot of heather honey.—A Berwickshire Bee Keeper, Duns, N.B., August 10.

DEALING WITH FOUL BROOD.

[6405.] I am sorry to say that foul brood has visited my apiary, and compelled me to destroy three of my nine stocks, which means a loss of 400lbs. of honey to me. I have taken so far, 84lbs. of surplus from four hives, and expect 42lbs. more yet if it rains soon.

I must thank you for publishing my query *re* bee forage plants, last February. All my sections (I work only for comb honey) are very well finished off this year. I have sold a lot at 1s. per lb., and the customer was very pleased with flavour, etc. I also examined a hive slightly affected with foul brood, but find that bees are keeping it at bay. I am treating as per "Guide Book." It is a very strong prime swarm of this year, but has not yielded any surplus at all. It is chockfull of honey and brood now.

I boiled all my infected hives for ten minutes in the copper, and burnt all the interior fittings in the fire—metal-ends and all—so I hope I have stamped the disease out. I think drastic measures like that ought to take effect. I hear that the season has been very good round this part of the country. I send name for reference.—PERPLEXED (Essex).

Queries and Replies.

[3384.] *Queen-Mating from Selected Drones.*—I am only a fifteen months' old bee-keeper, but already I am vastly interested in the subject, and in your weekly contribution to the literature relative thereto. I have also read a good deal elsewhere, but have not been able to learn what I am about to ask. I will, if I may, preface the question with a statement: At the commencement of this spring I had two hives, headed respectively by a native and an Italian queen, each of which bred drones. The colony of natives did not swarm, but, owing to an accident whereby I lost four-fifths of the original swarm, the Italian colony has swarmed twice, and the new queens have apparently been crossed by native or English drones. I have, therefore, now four hives—one native, one pure Italian, and two of hybrids. Judging by results, I place them in the following order of value: (1) Italians, (2) hybrids, and (3) natives. I am anxious, therefore, to perpetuate the pure Italians if possible, hence my question. From my reading it would appear that drone-eggs are the product of the queen, without any assistance from fertilisation by the mating drone. This makes me ask will the resulting drones from the cross-bred Italians, which will apear next spring, be pure Italians or not? My object in writing is, therefore, apparent: I propose to get rid of the native queen, and to substitute for it either a pure or a cross-bred Italian. By this means I hope to have only pure Italian drones in my apiary, and so give my next year's queens a better chance of mating with these alone. I think perhaps your answer, if the question has not been dealt with before in the pages of the journal, may be of interest to more readers of your valuable organ than myself. Name sent for reference.—G. B., Wallington, Surrey, August 11.

REPLY.—We fear your attempt to get queens mated from selected drones will only end in disappointment. The fact that young queens often travel long distances before mating takes place, renders the control of mating only possible by having drones of the kind selected on the wing before any other drones are flying within a couple of miles from your own bees.

[3385.] *Transferring Bees to Frame Hives.*—I should be much obliged for information on the following:—About the latter part of May last year I found a strong swarm of bees clustered just outside my garden. As I happened to be leaving home at the time and having nothing else at hand, I successfully hived the swarm into a large box holding a bushel or more. Being in London and only able to get home for a day or two at a time, no trouble was taken with them. I believe the box was full last August. They, however, turned out strong in Spring and have been so all through the present Summer, and not having swarmed (which was expected every day), about June 28 I slightly raised one side, and it seemed very heavy and quite full with bees and comb. To prevent swarming I gave more room by placing another box on top. I expect to be among the bees shortly and intend to start in a proper manner. My idea was to get "W. B. C." hives. What I wish to know is: (1) When is the best time to transfer the bees to these hives (if done), and (2) if done now, what is best method of so doing? According to "Guide Book," which I have just purchased, Spring is best, but I would like to get them settled as soon as possible. I have also purchased an early May swarm from which I have lost a cast, and I wish to treat these bees in the same manner as the others. I have also the opportunity of taking a swarm from an old rotten tree; could you tell me best way of doing this? I send name for reference and sign—BARNSBURY.

REPLY.—Referring to both queries enumerated above, we may say the task of transferring bees at this season means neither more or less than driving the bees and dealing with them as driven lots by feeding liberally till they fill the new hives with combs. The operation could only be undertaken by a skilled bee-keeper with any chance of success, and we don't know how far your experience goes. Consequently we should like some information on this point before we take the trouble and time involved in describing a plan for you to follow.

[3386.] *Stimulating Young Queens in Autumn.*—I shall be much obliged for your advice in the following: I recently overhauled my hives, and found one stock fully covered with bees on all frames and plenty of brood, but with very little honey in the combs—in fact, honey was found in three frames only, and not much at that. I have not had an ounce of surplus from this stock; while the super is exactly as when I put it on, two months ago. It was a strong stock in spring, but the expert, when on his spring

visit, showed me no less than four queen-cells hatched out and a fifth nearly hatched. Evidently the bees have swarmed two or three times, but so far as my personal knowledge goes, they have not. They are still fairly strong in numbers, and have plenty of brood hatching out. The point, therefore, is, shall I feed them now or wait awhile, and then give syrup. There is still a slight honey-flow on, but everything is dried up here now. I send name for reference, and sign PERPLEXED (Essex).

REPLY.—We advise you to keep the bees going by slow-feeding from this time forward. This will stimulate the young queen in the work of egg-laying at a time when in the natural order of things brood-rearing would fall off concurrently with the cessation of honey-gathering from the fields.

[3387.] *Uniting Bees in Well's Hive.*—I have recently hived a driven lot of bees in a large double-entrance or "Well's" hive already containing a stock in one half. This second lot of bees are headed by a young queen, while the other stock has an old one. I intend to unite these two stocks by removing the perforated dummyboard. Will you please say: 1. Would there be any risk of the bees fighting when this is done? 2. Should I first kill the old queen, or would the younger one be certain to get the best of the combat? Reply will much oblige. —ANXIOUS, Coventry.

REPLY.—1. Little or no risk if the bees of both lots are dusted with flour before uniting and the old queen is removed during the operation. 2. Yes, kill the queen first as stated above.

[3388.] *Uniting Swarm with Weak Stock.* — On the morning of July 29 I united a strong swarm with a weak stock. In doing this, I acted according to instructions in your valuable "Guide Book," first removing the old queen from the weak stock, and flouring both stocks well, etc. This morning I found enclosed queen on the flight-board of one of my hives, and should like to know if this is an old or a young queen, and what you think is likely to have been the cause of her being ejected. Am I right in thinking the united lot is not queenless? A reply in next week's B.B.J. will much oblige.—JAS. A. MACGREGOR.

REPLY.—The queen is an adult bee, but whether it is the mother-bee of the swarm or not we cannot say. The proper course is for you to examine the hive into which the swarm was put, and see if the queen is there, and all right.

[3389.] *Uniting Bees in "Well's" Hive.*—As a constant reader of your valuable paper, I should be glad of a reply to the following:—In the last week in June I introduced a virgin queen to a four-frame nucleus colony. Fourteen days later I examined the combs and found the young queen laying. I then added two more frames, and in a week's time there was sealed brood therein. I then united the colony with a queenless nucleus in a "Well's hive," one side of which was occupied by a strong stock. This nucleus had previously been supplied with a virgin queen, but she had disappeared, and I noticed that the bees from the other part of the hive were passing freely into the adjoining compartment (perhaps robbing). Now, after a fortnight, I find the second queen has also disappeared, without having laid any eggs since uniting. Very few bees remain, and they have built queen-cells which at present are empty, and they have nothing but sealed brood in the combs. I therefore ask: 1. Is there any possibility of the bees raising a new queen? 2. Do you think it likely that they had been destroyed by the bees from the other part of the hive? I sign myself—DRONE, Kent, August 6.

REPLY.—1. We think it more than probable that the same thing would occur again if you make another attempt at giving a queen to the bees in question. 2. It would be easier to answer this query if we had the "Well's" hive and its bees under personal observation; but, judging from the particulars given, it seems clear that the bees of both compartments of the hive are fraternising comfortably, and may be taken as one family with one mother-bee at the head of the colony. If you wish to stock the "Wells" with another colony, it should be done by shutting the second compartment off for a time, and then introducing a new lot of bees into it.

[3390.] *Rearing Superfluous Drones.*—1. Supposing a novice put drone-cell foundation into a new frame-hive, then allowed a stock of bees from a straw skep to transfer themselves into this hive, according to Guide Book's instructions, what would be the result? Would it be certain to mean the raising of an excessive number of drones in the colony, even though headed by a good young fertile queen? 2. If such is the case, what is the best thing to do with such hive?—G. CRAPPER, Sheffield.

REPLY.—1. Yes, but we hope no one would be so thoughtless as to give drone-cell foundation under the circumstances named. 2. If the bees are now at work on drone-cell foundation, the frame should be examined to see the condition of combs, and worker-cell foundation substituted wherever possible in the frames.

Bee Shows to Come.

A nominal charge of 2s. 6d. is made for notices (not exceeding 7 lines) in this column, 10 lines charged 3s. 6d.; up to 15 lines 5s., which covers cost of insertion from order till date of show. Cash should accompany orders for insertion.

August 24, at Exeter.—Annual Show of the Devon B.K.A., in conjunction with the Devon and Exeter Horticultural Society. **Entries closed.**

August 25, at Barnton, Cheshire.—Honey Show in connection with Floral and Horticultural Exhibition—two country, and six local classes for honey and wax. **Entries closed.**

August 28, at Cartmel, near Grange-over-Sands.—Show of Honey, etc., in connection with the Cartmel Agricultural Society. **Entries closed.**

August 29, at Chester.—Cheshire B.K.A. Show in connection with the County Agricultural Society. Open classes for Hives, Observatory Hives, Sections, and Extracted Honey. **Baroness Burdett-Coutts' prize**

hive for best exhibit shown by cottager member. **Entries closed.**

August 29, at Forbury Gardens, Reading.—Honey Show of the Berks. B.K.A. Schedules from the Hon. Sec., D W. Bishop-Ackerman, 16a, King's Road, Reading.

August 30, at Montgomery.—Honey Show in connection with Horticultural Exhibition. Two open classes for six 1-lb. sections and six 1-lb. jars extracted honey. **Entries closed.**

September 1, at Bramhall, Stockport.—In the grounds of the Bramhall Hall. Honey Show—under the auspices of the C.B.K.A. Liberal prizes. Low entrance fees. Open and Local (three mile limit) Classes. Schedules from John Sibson, Hawthorn Grove, Bramhall. **Entries close August 24.**

September 8, at Dumfries.—South of Scotland B.K.A. 14th Annual Show of Honey, Bees, and Appliances. Five open classes—viz., three 1-lb. jars, three 1-lb. sections, and for single jar and section (free entry), and cake of wax; also handsome money prizes and valuable medals, for members only. Schedules from Jas. Johnstone, Sec., Nelson Street, Maxwelltown. **Entries close September 1.**

September 11, at Blenheim Park, Woodstock.—Annual Show of the Oxfordshire B.K.A. Open classes for single 1lb. section, and for single 1lb. jar Extracted Honey, with free entry. First prize, 10s.; 2nd, 5s.; 3rd, 2s. 6d. H. M. Turner, Hon. Sec., 4, Turl Street, Oxford. **Entries close September 6.**

September 12 and 13, at Edinburgh.—Thirteenth Annual Exhibition of Midlothian B.K.A. in Waverley Market. Open classes for six sections heather, six sections flower, six jars heather, six jars flower. Prizes, 15s., 10s., 5s. Entry, 2s. per class. Schedules from W. Weir, Heriot, Midlothian.

September 13, at Castle Douglas.—Honey Section, Dairy Show. Liberal prizes. Five open classes—viz., three 1-lb. jars, three 1-lb. sections, single jar, single section, and for cake of beeswax. Schedule from Jas. Johnstone, or from L. Aird, Hardgate Schoolhouse, Dalbeattie. **Entries close September 1.**

September 8 to 15, at the Agricultural Hall, London.—Honey Show in connection with the Confectioners', Bakers', and Allied Traders Annual Exhibition and Market. (See large advertisement on page i.) **Open to all British Bee-keepers.** Entry fee in each class one shilling. Schedules from H. S. Rogers, Secretary, Exhibition Offices, Palmerston House, Old Broad Street, London, E.C.

September 20, 21, and 22, at Crystal Palace.—Surrey B.K.A. Annual Exhibition of Bees, Honey, Wax, and Appliances, etc. Twenty-six classes (ten open to all). Increased prizes and medals. Schedules from F. B. White, secretary, Marden House, Redhill, Surrey. **Entries close September 7.**

September 22 to 29, at the Agricultural Hall, London.—Honey Show in connection with the Twelfth Annual Exhibition and Market of the Grocery and Kindred Trades. Nearly £50 in prizes for honey and beeswax including four prizes of £4, £3, £2, and £1, in honey trophy class. **Open to all British Bee-keepers.** Schedules from H. S. Rogers, Secretary, Exhibition Offices, Palmerston House, Old Broad Street, London E.C.

September 26, at Altrincham.—Show of Honey Products, in connection with Altrincham Agricultural Show. Open to United Kingdom: Classes for Hives, Observatory Hive, 12 Jars Extracted Honey. Open to County of Chester only: Classes for Trophy, Amateur-built Hive, Two Shallow Bars, 12 Jars Run, 12 Sections, Wax, etc. Special classes for cottagers. Special classes for Society's district. Liberal prizes. Low entrance fees. Schedules from Mr. J. H. Hall, 2, Dunham Road, Altrincham. **Entries close September 9.**

October 9 to 12, at the Agricultural Hall, London.—Show of Honey and Bee Produce in connection with the British Dairy Farmers' Association. Numerous and liberal prizes for honey, etc., including the valuable Silver Challenge Cup of the B.B.K.A. Schedules from Mr. Wm. O. Young, Secretary, 12, Hanover Square, London, W. **Entries close September 12.**

October 18 to 21, at Waverley Market, Edinburgh. — Honey show in connection with the Tenth Annual Edinburgh and Midlothian Industrial Exhibition. All open classes. Beautifully illustrated prospectus, price 2d., from A. Hutchinson, 15, Leith Street, Edinburgh. **Entries close September 27.** (See advt., page ii.)

Notices to Correspondents & Inquirers.

H. C. (I.O.W.).—Bee Paralysis.—The two articles to which you refer were written by the editors of this journal, who hold themselves responsible for all that was said therein. Moreover, your letter, presumably sent for publication, practically confirms everthing we said, and the words quoted are printed *verb. et lit.* from press cuttings sent in scores by readers asking for information concerning the matters dealt with. So "famous" was the name of our correspondent becoming, that the B.B.J. office was beginning to feel perturbed through callers and inquirers desirous of knowing what it was all about. Having said this much, we trust our correspondent will endeavour to convey the information quoted from the "A B C of Bee Culture" in our issue of last week to all bee-keepers in the Isle of Wight whose apiaries are troubled with bee paralysis, so that they may possess the latest information on the subject and be perhaps able to benefit themselves in dealing with the disease in question. We have forwarded your letter to our contributor "L. S. C."

C. A. W. (Hathersage).—Accidents Caused by Bees.—We receive press cuttings reporting most of the accidents caused through bee-stings and as a rule consign them to the "W.P.B." It is always regrettable when such things do happen—which is not often—but it cannot do any good to print accounts of them in the B.B.J. Incidents of this kind get publicity enough in the daily press.

Enquirer (Cheshire).—1. Mr. G. Rose, Great Charlotte St., Liverpool, stocks a transparent window-label for honey, which is useful and attractive as an aid to creating a market for honey. 2. Some dealers besides Messrs. Abbott Bros., Southall, may stock the 'triangle-brand honey jars, but we cannot say who they are, nor do we know who supplies the other brands you name.

G. O. (Ootacamund, S. India).—The only dealer we know of who used to import and sell the bees you refer to, appears to have now almost given up importing them.

W. J. F. (Cleator Moor).—Defaulting Advertisers.—There must be a mistake somewhere, as it is within our knowledge that numerous readers have availed themselves of the offer, and yours is the first and only complaint we have had.

Miel (Leicester).—Using Fence Separators. —1. The "ridge" sometimes seen on face of sections worked with the fence separator is due to some fault in the separators used. As made and used in America, the "ridge" you justly complain of is never seen. 2. The pamphlet you name can be had from the Rev. G. Bancks, Hartley Rectory, Longfield, Kent.

NOVICE (Wharfedale). — Bees Transferring Themselves.—In placing stocks of bees in skeps above the top-bars of frame-hives for the purpose of transferring the bees into the latter, it must be done during the proper season, viz., when the bees need room for expansion of the brood-nest and are preparing to swarm. At that time they will start work in the frame-hive offered them, but this plan must not be deferred till the swarming season is practically over, as the bees will not then avail themselves of the proffered room.

R. WILLAN (Staffs).—Removing Bees from Hollow Tree.—1. If your runaway swarm has located itself in a hollow tree as stated, the entrance hole "being a considerable height from the ground," and you "will not be allowed to cut a large hole in the tree," we advise you not to attempt the task of destroying the bees with cyanide of potassium in order to get the honey. "The game will not be worth the candle," and an accident might happen such as we do not care to think of. 2. The hon. sec. of the Staffs B.K.A. is the Rev. G. C. Bruton, Great Haywood Vicarage, Stafford.

W. W. BOLE (Essex).—Bee Nomenclature.—The insect sent is a female of one of the British wild bees known as the *Megachile* or leaf-cutter bees. All of these construct the cell in which the larva is reared from the leaves of trees, skilfully cut and folded by the mother-bee itself. These cells are wonderfully made, and arranged in holes bored in wood by the bee.

J. W. (Glasgow).—Like the above your specimen also belongs to the leaf-cutter species, but it is smaller than the first-named specimen, and is a female *Magachile argentata*, which forms its tunnels in sandbanks.

R. M. (Lincs.).—The sprig of heather sent is the *Erica cinerea*, or bell-heather. It is not the best for honey, though it yields fairly well in some seasons. *Calluna vulgaris*, or common ling, is the finest heather for bee forage.

W. A. (Truro).—Underselling and Overcrowding.—It is hardly worth filling space with suggestions asking for B. K. Associations to lay out their spare cash in advertising the virtues of honey. We know of few B.K.A.'s with any spare cash on hand, and bee-men should certainly try and make a market for themselves. The same may be said of preventing overcrowding hives in a given neighbourhood. It cannot be done in this country.

A. G. W. (Gloucester).—Bee Insurance.—(1) For information on this subject apply to Mr. E. H. Young, Secretary B.K.A., 12, Hanover Square, London, W. (2) Queen sent is an adult, and shows no sign of being aged or worn out.

Suspected Comb.

T. L. (Wakefield).—About nine out of every ten of sealed cells in comb sent, contained a young bee alive and ready to hatch out, nor was there more than three or four cells with brood in larval condition, and in these cases the dead larvæ were chilled. It is therefore certain that, save for a very few, the brood will hatch if left in the hive, and we advise leaving the stock severely alone till the season ends. It is so common to see scores of dead bees on the ground below hives at some seasons, that they are but little noticed by experienced bee-men.

(The later sample of dead larvæ received since the above, is fully characteristic of "black brood," as described in American bee journals.)

DOUBTFUL (Derby).—There is "F. B." in comb, but it does not appear to be a bad case, and with the use of preventives, it is quite likely the stock will be all right again ere long.

Honey Samples.

F. G. BROWN (Wilts.).—Your honey is an excellent sample from white clover. It would stand well on any show bench.

T. W. (Colchester).—No. 1 sample. An excellent honey on all points for the show-bench. No. 2 is many points below No. 1, but is a fairly good honey for marketing purposes. No. 3 is also a very good honey indeed, but hardly equal to No. 1. It is, however, better than No. 2.

K. H. (Sheffield).—Sample is good honey somewhat spoilt by a little honey-dew.

F. W. (Essex).—1. Your honey is good enough for the show-bench anywhere. Colour, aroma, and flavour, being quite up to show standard. 2. It is mainly from white clover but has a "dash" of sainfoin in it.

J. W. (Notts.—Both samples are very good. That in tall bottle is less clear and bright than the one in small flat phial, and it would be improved by straining, to free it from a few small specks. Of the two, we prefer the sample in small phial for the show-bench.

FRED BREWERS (Lincs.).—The clear sample (No. 1) sent is a nice honey, quite suitable for the show-bench at a local show; but hardly up to winning quality for an important exhibition. No. 2 is rapidly granulating, but there is nothing uncommon in this; some honeys will granulate far sooner than others, and as yours come from Lincs. the early granulation may arise from the bees having worked on the fields where mustard is grown for seed.

F. H. (Leicester).—Your sample is very good indeed on all points. The fact of its being "very thick" is a very strong point in its favour, and we consider the honey before us as we write, is of winning standard for any show bench.

MIEL (Leicester).—1. Sample is very good in colour, flavour, and consistency, but full of air-bubbles. It will stand very well on show bench.

A. CROW (Sheffield).—There is nothing wrong with your honey to make it unfit either for bees or for table use. It is only a bit thinned by autumn-gathered honey from the bramble or blackberry, which is usually thin and dark in colour.

R. D. (Grosvenor).—Sample is fairly good in flavour, but colour is made dark by honey-dew. It is quite fit for table use.

***** Some Queries and Replies, &c., are unavoidably held over till next week.***

Special Prepaid Advertisements

Twelve words and under Sixpence: for every additional Three words or under, One Penny.

WHITE CLOVER SECTIONS, full weight, good colour, 8s. dozen; 6 dozen lots, 7s. dozen, packed secure; free on rail.—W. BURDEN, Mere, Wilts. s 34

BEES.—Four strong healthy stocks for sale, in "Cowan" hives; £1 each.—ELM HOUSE, Bolton Road, Grove Park, Chiswick. s 48

EXTRACTED HONEY, 50s. cwt.; 1lb. glazed sections, 100s. gross; carriage paid.—THE RAEBURN APIARIES, Sawbridgeworth. R 91

QUEENS, 5s.; Driven Bees, comb and brood, 1s. 6d. lb.—KEATLEY, Four Oaks, Birmingham. s 43

HONEY, finest quality, 28lb. tins, 6d. lb. Sample 2d.—H. MAY, Kingston, Wallingford. s 42

HEALTHY STOCKS on four frames, with 1906 Queen, 11s. 6d.; three ditto, 10s. 6d.; good stocks in skeps; 1906 Queen, plenty stores, 12s. 6d., 13s. 6d.—W. WOODS, Normandy, Guildford. s 41

HEALTHY DRIVEN BEES and QUEEN, 4s. per lot; box returned.—E. GARNER, Broom, Biggleswade, Beds. s 39

2½ CWT. of HONEY for Sale, in ½ cwt. tins.—D. COLE, Hertingfordbury., Hertford. s 38

WELLS HIVE, complete; swarm catcher, new skep and cap, lot 23s.—PICKERSGILL, Bishop Monkton, Leeds. s 37

WANTED, DRIVEN BEES. Will give in exchange poultry, laying.—HIGGS, Northrode, Congleton. s 36

GOOD CLOVER SECTIONS for Sale.—Apply J. W. NELSON, Appleby, Westmorland. s 35

GOOD SECTIONS, 8s. per dozen; carriage paid on 3 dozen; Light Extracted, in screw caps, 8s. dozen; in toe-over, 6s. 6d. dozen.—W. CANHAM, King's Parade, Soham, Cambs. s 33

FOR SALE, PURE ENGLISH HONEY, light colour; also a few dozen Sections; sample 3d.—W. J. LANE, The Cuckoo, Ashwell, Herts. s 32

SECTIONS, well filled, for Sale, in quantities to suit purchasers; 7s. per dozen.—PHILLIPS, Fisher's Green, Stevenage, Herts. s 31

FOR Sale, 40 dozen CLOVER SECTIONS.—J. DAY, Offley Grange, Hitchin, Herts. s 29

FOR SALE, STOCK or BEES, in frame hive, with super and nine shallow combs, 17s. 6d.; three section racks, with dummies and metal dividers, 3s.—THOMAS, Pwllerochan Rectory, Pembroke. s 28

SEVERAL STOCKS OF BEES FOR SALE, from 17s. 6d. to 30s.—MISS SAXELBY, Hall Green, Birmingham. s 27

STING PROOF GLOVES, 2s.; with sleeves, 2s. 6d., post free. Why pay more?—KENT, Manufacturer, Dorchester. s 26

WANTED, exchange for two 15 lb. skep supers, complete, starters, etc.; good condition. Offers wanted. THOMAS, Aberdur, Gellywen, St. Clears, S. Wales. s 25

SECONDHAND HIVES for Sale (or exchange bees), ventilated bottom with shutter, cheap; guaranteed to have contained healthy bees; double walled.—18, Sheaf Garden Terrace, Sheffield. s 24

DRIVEN BEES, with Queen, healthy, and safe arrival guaranteed, 1s. 3d. per lb. till Sept. 15; after that date 1s.; cash with order; boxes to be returned, or charged 3s. CHARLES H. BOCOCK, Ashley Apiaries, Newmarket. s 46

HONEYCOMB DESIGN, Crown, 1906; splendidly worked out and ready for show bench; cheap.—C. COX, Honeycomb Design Maker, Brampton, Northampton. s 21

TESTED NATIVE QUEENS, July reared, post free, in automatic introducing cage, 2s 6d. for cash.—CHARLES H. BOCOCK, Ashley Apiaries, Newmarket. s 45

FOR SALE, SIX HEALTHY STOCKS of BEES; five stocks in box hives (one double), and one in skep, with section racks and spare sections, super clearer, smoker, feeder, etc., with more than sufficient stores for wintering, price £5; giving up bee-keeping.—MARTIN, "Cumbria," Cowper Road, Deal, Kent. s 22

"RAYNOR" EXTRACTOR; never been in use; perfect condition; 12s. 6d.—HUTCHISON, Earlston, Prestwick. s 23

QUANTITY FINE EXTRACTED HONEY for SALE, 60s. cwt., including tins; samples 3d.—AVERY, Deverill, Warminster. s 40

HEALTHY DRIVEN BEES, with Queen, in 4lb. or more lots, at 1s. 3d. per lb.; boxes returnable, or will be charged for. Also Healthy Fertile Young QUEENS, at 1s. 6d. each, post free.—R. BROWN, Flora Apiary, Somersham, Hunts. s 47

HEALTHY DRIVEN BEES, with Queen, 5s. lot; fertile QUEEN BEES, 2s., per post 2s. 2d., packages free.—ROLLINS, Stourbridge. s 44

HEALTHY DRIVEN BEES, with young 1906 Queen, 5s. per lot; package not returnable. Put on rail same day order is received.—W. D. T. RICHARDS, Postman, Kingswinford, Dudley, Worcester. s 19

HEALTHY DRIVEN BEES, headed by 1906 Queens, f.o.r.; package free; 5s. lot.—BROWN, Expert, King Street, Wellington, Salop.

YELLOW CROCUSES, slips Arabi Alpinus, 100 1s. 3d., free.—BRAYSHAW, Aultmore, Keith. s 17

DRIVEN BEES, a good supply, strong healthy lots, with 1906 Queens, 5s.; natural raised laying Queens, 2s. 6d.—T. BRADFORD, Expert, 68, Droitwich Road, Worcester. s 13

GOOD HONEY, 28 lb. tins, 6d. lb.—GEORGE THOMPSON, "Beecroft," Helpringham, Lincolnshire. s 12

WANTED, BEE APPLIANCES in exchange for ONE TON of GOOD HONEY; or would sell in any quantity to suit purchaser.—For price and sample (2d.) apply T. STAPLETON,, Gwinear, Hayle, Cornwall. s 11

STOCKS of BEES for SALE, singly or otherwise; moving.—WARD, Ludborugh, Louth. s 5

FOUR THREE-FRAMED NUCLEI, with 1906 laying Queens, 7s. 6d. each.—J. ADDYMAN, Knotfield Lodge, Horsforth, Leeds. s 3

QUEENS, selected from honey-gathering stocks; Black English, fertile, 1906, 2s. 8d., free, in introducing cage; Nuclei four-frame, 10s.; brood combs, suit driven bees, 7d. each; driven bees, 1s. 6d. per lb. for 4lb. lots, packed free; now ready. Light honey, 30lb. tin 14s. 6d., 52s. 6d. cwt.; sample 2d.—CHARTER, Tattingstone, Ipswich. R 98

BEES of my hardy prolific strain of selected workers. 1906 tested Queens, 5s. 6d. Three-frame Nuclei, with Queen, 12s. 6d. Bees, 1s. 6d. lb., for 5lb. lots or over. Packages to be returned. Guaranteed healthy. Safe arrival.—WHITING, Valley Apiaries, Hundon, Clare, Suffolk. R 94

HEALTHY DRIVEN BEES, with Queen, 5s. per lot. Package returnable. — JOHN P. PHILLIPS, Spetchley, Worcester. R 92

QUEENS, choice fertile 1906, bred from my non-swarming stocks, 3s. each; immediate despatch.—TAYLOR, Hollyhurst, Boldmere Road, Wylde Green, near Birmingham. R 75

SECTION GLAZING.—Best quality lace paper, made especially for bee-keepers' use; 100, in white pink, green, or blue, 6d., 300 1s. 4d., 500 2s. 2d., 1,000 3s. 9d., post free; lace one side, lace bands (lace both sides), white 2⅛, 3 and 3¼ wide, 100 1s. 2d., 200 2s. 3d., 500 4s.; a few in pink and blue, 100 1s. 4d., 200 2s. 6d., post free.—W. WOODLEY, Beedon, Newbury. R 27

DRIVEN BEES, with Queens, commencing August; 3s. 6d. per lot, cash with order; boxes returned; orders in rotation.—T. PULLEN, Ramsbury, Hungerford. R 11

READY for Delivery, healthy FERTILE QUEENS (1906), 3s. 6d., in introducing cages, post free.—CARBINES, Bee Expert, Cardinham, near Bodmin, Cornwall. Q 96

Editorial, Notices, &c.

YORKSHIRE AGRICULTURAL SOCIETY.

SHOW AT MIDDLESBROUGH.

The Annual Show of Honey and Bee Appliances in connection with the Yorkshire Agricultural Society was held at Middlesborough, on August 8, 9 and 10. The weather was unfavourable, but there was a good attendance of visitors, while the display of honey and appliances was the best that has been seen at the Yorkshire Show for the last five years.

Two additional County Classes (with 32 entries) helped to stimulate competition among bee-keepers on a small scale, and, but for the drought, this year's exhibition would undoubtedly have been a record one. During the three days the Rev. R. M. Lamb, of Burton Pidsea, gave lectures on bee-keeping, practical illustrations being supplied by Mr. Dixon, of Leeds.

Mr. Boyes, of Beverley, acted as judge, and made the following awards:—

OPEN CLASSES.

Collection of Hives and Appliances.—1st, Wm. Dixon, Leeds; 2nd, E. H. Taylor, Welwyn; 3rd, A. Jemieson, York.

Complete Frame Hive for General Use.—1st and 2nd, Wm. Dixon.

Observatory Hive with Bees and Queen.—1st, Wm. Dixon; 2nd, E. H. Taylor.

Honey Trophy.—1st, Wm. Dixon (one entry only).

Twelve 1-lb Sections Heather Honey.—1st, Wm. Dixon; 2nd J. Pearman, Derby.

Twelve 1-lb. Sections other than Heather.—1st, A. W. Weatherhogg, Lincoln; 2nd, J. Pearman; 3rd, H. Waddington, Borobridge.

Twelve 1-lb. Jars extracted Heather Honey.—1st, Jno. Berry, Llanrwst, N. Wales; 2nd, H. Waddington.

Twelve 1-lb. Jars Extracted Honey.—1st, J. Pearman; 2nd, Jno. Berry; 3rd, Wm. Dixon.

Beeswax (3lbs.)—1st, F. Harris, Boston; 2nd, Jno. Berry; 3rd, J. Pearman.

COUNTY CLASSES.

Six 1-lb Sections (Amateurs only), 32 entries.—1st, G. Garbutt, Thornaby; 2nd, E Adamson, Tarn; 3rd, J. E. Phillips, York.

Six 1-lb. Jars Extracted Honey.—1st John Oldfield, Rotherham; 2nd, C Middleton, Ripon; 3rd, E. Adamson, Tarn.

SOMERSETSHIRE B.K.A.

ANNUAL SHOW.

The first Annual Honey Show of the above Association was held at Clevedon, in conjunction with the Horticultural Show, on August 8th. The list of entries was large one, and the general quality of the exhibits so high as to render it by no mean an easy task for the Judge, Mr. S. Jordan, of Bristol, to allot the prizes. Most of these fell to exhibitors in the county. This seems to be a good augury for the success of our new Association.

The lectures given in the bee tent by Mr. J. W. Brewer, of Bath (on behalf of the Somerset County Council) were much appreciated by large crowds of visitors.

LIST OF PRIZES.

Display of Honey.—1st, G. W. Kirby, Knowle; 2nd, L. E. Snelgrove, Weston-super-Mare.

Twelve 1-lb. jars Extracted Honey.—1st, E. L. and H. C. Jones, Andover; 2nd, G. W. Kirby; 3rd, G. H, Caple, Stanton Prior; v.h.c., S Gibbs, Bleadrey; h.c, J. Derrick, Portishead; c., B. J. Over, Weston-super-Mare.

Twelve 1-lb sections.—1st, G. W. Kirby; 2nd, James Coates, Tiverton; 3rd, J. W. Brewer, Bath; v.h.c., H. Griffiths, Henbury; h.c., H. F. Jolly, Clifton; c., J. Brown, Bristol.

Single 1-lb. jar Extracted Honey.—1st, J. Charlton, Weston-super-Mare; 2nd, J. Derrick, Portishead; 3rd, G. H. Caple; 4th, J. Coates; v.h.c., G W. Kirby; h.c., W. Withycombe, Bridgewater.

Single 1-lb Section.—1st, J. Coates; 2nd, H. F. Jolly; 3rd, G. W. Kirby; 4th, S. Gibbs; v.h.c., Miss Hardwick, Portishead; h.c., J. W. Brewer.

Beeswax (open).—1st, L. E. Snelgrove; 2nd, B. J. Over; 3rd, G. W. Kirby; h.c., J. Brown.

Collection of Appliances.—1st, Brown & Sons, Bristol; 2nd, Ward & Co., Bath.

Observatory Hive.—1st, L. E. Snelgrove; 2nd, G. W. Kirby.

Highest Number of Points in Show (Challenge Honey Pot).—G. W. Kirby.

Baroness Burdett-Coutts' Prize Hive (Cottager Members only).—S. Gibbs.

Three Shallow-Frames for Extracting. 1st, G. W. Kirby; 2nd, B. J. Over; 3rd, W. H. Pain, Bridgewater.

Beeswax.—1st, G. W. Kirby; 2nd, B. J. Over; 3rd, C. Jones, Knowle.

Three 1-lb. Jars Granulated Honey.—1st, C. Jones; 2nd, G. W. Kirby; 3rd, S. Gibbs.

Six 1 lb. Sections.—1st, G. W. Kirby, 2nd, J. Coates; 3rd, J. W. Brewer; v.h.c., C. Jones; h.c., G. Tatham, Wedmore.

Six 1-lb Jars Extracted Honey.—1st, G. W. Kirby; 2nd, G H Caple; 3rd, W. Withycombe; v.h.c., C. Jones; h.c., S. Gibbs.

Honey and Confections.—1st, G. W. Kirby.

Three 1-lb. Sections (Novices).—1st, G. Tatham, Wedmore; 2nd, Miss Terrell, Clevedon; 3rd, C. Jones; v h c., M. Tilley, Wrington.

Three 1-lb. Jars Extracted Honey.—1st, C. Jones; 2nd, G. Tatham; 3rd, Miss Hardwick.—L. E. SNELGROVE, Hon. Sec.

YETMINSTER DISTRICT B.K.A.

ANNUAL SHOW.

The Yetminster District Beekeepers' Association held their annual show at Yetminster, on August 16, in a field kindly lent by Mr. G. Jolliffe.

The number of entries were hardly as numerous as in previous years, especially in the open classes, but the quality of the honey was excellent and the competition very keen. Demonstrations with live bees were given during the afternoon by Mr. M. H. Tilley, Technical Instructor for the County of Dorset, which were well attended.

Mr. W. Boalch, Yeovil, judged the exhibits and made the following awards :—

MEMBERS' CLASSES.

Shallow-frame of Comb Honey.—1st, T. and 2nd, G. Leeding, Bradford Abbas; 3rd, T. Bishop, Bradford Abbas.

Shallow Frame of Comb Honey.—1st, T. Trott, Leigh; 2nd, F. Trott, Leigh; 3rd, W. Pomeroy, Bradford Abbas.

Six 1-lb. Sections.—1st, A. F. Brister, Thornford; 2nd, G. Leeding; 3rd, F. Trott.

Bell Glass (over 10 lb.).—1st, C. Smith, Wyke; 2nd, G. Leeding; 3rd, T. Bishop.

Bell Glass (under 10 lb.).—1st, G. Leeding; 2nd, T. Bishop; 3rd, C. Smith.

Six 1-lb. Jars (Dark) Extracted Honey.—1st, T. Bishop; 2nd, G. Leeding.

Six 1-lb. Jars (Light) Extracted Honey.—1st, T. Bishop 2nd, G. Leeding; 3rd, C. Smith.

Beeswax.—1st G. Leeding; 2nd, T. Bishop; 3rd, F. Trott.

Collection of Honey and Wax.—1st, T. Bishop; 2nd, G. Leeding.

OPEN CLASSES.

Three 1-lb. Jars Extracted Honey.—1st, T. G. Hillier, Andover; 2nd, T. Bishop.

Three 1-lb. Sections.—1st, T. G. Hillier; 2nd, E. C. R. White, Newton Toney, Salisbury.

Beeswax.—Equal 1st, E. C. R. White and G. Leeding.

Three 2-lb. Sections (Tilley's Patent).—1st, T. Bishop.

Collection of Bee Flowers.—1st, Miss Leeding, Bradford Abbas; 2nd, Miss Mary Patch, Bradford Abbas.

KENT HONEY SHOW.

The Annual Show was held on August 15th, at Wye, in connection with the local Horticultural Show. This Show has risen to large proportions, and attracted a very great attendance of visitors. The entries numbered 298, as against 187 last year. The Committee had provided a large marquee, and the exhibits made a magnificent display of honey. The trophies were a grand lot, and along with the whole of the exhibits must have entailed a very heavy task on the Judges. The only drawback was that the Bee Lectures and Demonstrations could not be given owing to half a gale blowing at the time.

The Judges were the Rev. Canon Carr, Adisham, and the Rev. W. M. B. Osmaston, Goodnestone, who made the following awards :—

COUNTY CLASSES.

Six 1-lb. Sections (25 entries).—1st, W. S. Mortley, St. Michael's; 2nd, E. R. Nash, Pluckley; 3rd, S. Burden, Headcorn; 4th, J. Garratt, Meopham.

Two Shallow frames Comb Honey for Extracting.—(17 entries).—1st, W. J. Moody Smith, Pluckley; 2nd, E. R. Nash; 3rd, S. Darlington, Charing; 4th, S. Burden.

Six 1-lb. Jars (Light) Extracted Honey.—(30 entries).—1st, E. R. Nash; 2nd, S. D. Dixon, Kennington; 3rd, W. S. Mortley; 4th Hon. Mrs. Deedes, Hythe.

Six 1-lb. Jars (Dark) Extracted Honey.—(21 entries).—1st, J. G. Hall, Wye; 2nd, W. J. Moody Smith; 3rd, J. Dunster, St. Michaels; 4th, A. E. Allchin, Kennington.

Three 1-lb. Sections and three 1-lb. Jars Extracted Honey.—(18 entries).—1st, E. R. Nash; 2nd, W. S. Mortley; 3rd, J. Garratt.

Beeswax.—(18 entries).—1st, E. R. Nash; 2nd, T. Head, Canterbury; 3rd, Mrs. Hall, Wye.

Mead.—(9 entries).—1st, Mrs. Hall; 2nd H. Head, Wye.

Soft Bee Candy (10 entries).—1st, E. R. Nash; 2nd, S. Darlington.

Honey Cake (11 entries).—1st, Mrs. H. Wilson, Wye; 2nd, Mrs. S. Burden, Headcorn; 3rd, Mrs. T. Burgess, Willesborough.

Display of Bee Flowers (5 entries).—1st, W. Hills, Kennington; 2nd, Mrs. H. Wilson.

Two 1-lb. Jars extracted Honey (cottagers only, 5 entries).—1st, J. Chittenden, Wye; 2nd, A. Mills, Wye.

OPEN CLASSES.

Honey Trophy.—1st, and Champion Silver Cup (presented by Mrs. Henry J. King) E. R. Nash; equal 2nds and specials, S. Burden and Mrs. J. G. Hall.

Single 1-lb. Jar (Light) Extracted Honey.—(52 entries)—1st, H. W. Saunders, Thetford, Norfolk; 2nd, S. G. S. Leigh, Broughton, Hants.; 3rd, F. G. Smith, Hythe, Kent.

Single 1lb. Jar (Dark) Extracted Honey.—(30 entries).—1st, J. Kerr, Dumfries, N.B.; 2nd, F. G. Smith; 3rd, Miss Currie, Sibertswold, Kent.

Single 1-lb. Section.—1st and Champion Cup presented by the Mayor of Tenterden, E. R. Nash, Pluckley, Kent; 2nd, A. W. Weatherhogg, Willoughton, Lincs.; 3rd, T. G. Hillier, Hurstbourne Tarrant, Hants.

Collection of Bee-appliances.—1st, T. Head, Canterbury; 2nd, Mrs. Seadon, Bromley.

JOHN TIPPEN, Secretary

AMERICAN AND COLONIAL PAPERS.

EXTRACTS AND COMMENTS.

By D. M. Macdonald, Banff.

What Causes Spring Dwindling?.—"A dozen persons," says Mr. J. L. Byer in the *Canadian Bee Journal*, "would probably give as many different answers to the query." He himself declares his case "inexplicable," although he makes a guess that the long distance bees had to travel for early spring food and water may be an inciting cause. On page 324 it is set down to "those failing queens which swarmed the year before." Now I suffered badly, like Mr. Byer, last spring, but age of queens had nothing to do with it, as, so far as I observed, young and old suffered alike. If I were to make a guess I would set it down to the early cessation of honey-flow the previous season, with the consequent curtailment of autumn breeding. As a resultant, too many aged bees, and too few young bees, went into winter quarters; while the early approach of winter, and its being lengthened out to the end of May, made a considerable, or even an abnormal, amount of spring dwindling almost inevitable.

Salt in Beeswax.—The *American Bee-keeper* advises the use of salt freely in rendering beeswax. "The resulting product will be of much better colour than where no salt is used in the process." Some of our wax prize-takers might let us know what value they set on the above suggestion.

Sane Words.—"Unless the queen-breeder produces honey on a fairly large scale, or gets his breeders from one who does, what can he know about the honey gathering qualities of his stock?" These sane words were written by Mr. J. A. Green. Dr. Miller placed his imprimatur on them in the last issue of *Gleanings*, and I heartily endorse them.

Weak Hives.—Mr. Alexander says "some bee-keepers are so slack that a large per cent. of their colonies give them little or no surplus. The idea of having one hundred colonies, and getting surplus from only seventy-five, is all wrong, and this way is a slipshod method of caring for bees. My advice is, just as soon as you find a colony that is not doing well, attend to it at once. That is your business. Either put it in such a shape that in a few days it will be all right, or unite it with another. If you do not want to unite, put it with your nuclei, and consider it one of them." Tinkering with weaklings is little good. We don't keep bees for the sake of merely counting a large number of hives.

Some New Bee Diseases.—In view of the fact that "Black Brood" is making its presence felt in this country, it may be well to give some means of differentiating between it and Foul Brood, insomuch as they have several features common to both. "The two diseases have several symptoms that are alike. For example, the general appearance of comb affected with either disease; perforated and sunken cappings, yellow, brown, or coffee-coloured larvæ is about the same. Both have a distinctly disgusting odour, and the odours are alike, or very much so. Foul brood smells like old glue, while the diseased matter from black brood has a little more of a putrid smell. The main point of difference, however, is that the one *ropes* and the other does not. The dead matter from foul brood strings out half an inch to an inch, while in black brood it has a jelly-like or watery consistency. Pickled brood sometimes looks very much like black, but it does not have the odour." Black brood can also be very devastating, as we are informed that it "came very near wiping out bee-keeping in New York," and it seems from Mr. Root's reports that it is becoming more general. Seeing that queens are being sent over to us in considerable numbers, it is well that bee-keepers should keep a wary eye on the progeny of these queens. Our Australian cousins have had a considerable experience of bee paralysis, and several large yards have been all but wiped out by its ravages. I regret that none of the writers of prize essays in the *Australasian Bee-Keeper* have submitted reliable cures worthy of being reproduced here. They seem to be groping in the dark, and trying any likely palliative. One crumb of comfort I can give. So good an authority as Mr. Morley Pettitt, Canada, says in A.B.J., "We generally consider this disease hardly worth serious consideration in the north. No matter what the treatment, it usually disappears in a good honey-flow. Still, occasional reports show that it is well worth looking after, and it should be thoroughly investigated by our scientific men."

Three Queens in One Hive.—Mr. L. H. Scholl reports an instance of this unusual occurrence. "I united two hives with old failing queens. Later I found cells, and destroyed all but one. At a third visit I found the colony unusually strong, and hunted up the queen to clip her in order to hinder them from swarming. I soon found an old clipped queen hobbling over the combs *depositing eggs!* On another frame I found a second clipped queen, and on looking further found a third queen that was mated and laying, which was the young one. So I had *three laying queens* in a hive at one time." As there is "nothing new under the sun," some of our readers may be able to cap this story.

Size of Frames.—Editor York, page 553.

states that the Langstroth frames are 35 per cent. larger than our Standard. I, after allowing for thicker wood and taking internal space (the true test), work it out at rather under 25 per cent. Our hives, with ten or eleven frames, have practically the same breeding space as an 8 frame Langstroth. In view of this, the following sentence from Dr. Miller, in an article on "What hive I would use if I were starting anew," is very interesting and instructive. "My hives are eight frame, used two story high whenever needed before the honey harvest, but always reduced to one story when supers are given."

Improvement of Bees.—As illustrating the force of my recent contention regarding queen-rearing, I extract the following from recent writings of Mr. Green, whose knowledge and experience is very varied and extensive. "The results have been pitifully small and inadequate considering our opportunities. Leaving out the claims of advertisers, many of which are not substantiated by results, it does not seem that anything wonderful has been done. Too much of our breeding has been done haphazard, and without any intelligent system or direction. My own experience with some of this so-called superior stock has been very disappointing." I venture to say this will be the experience of most.

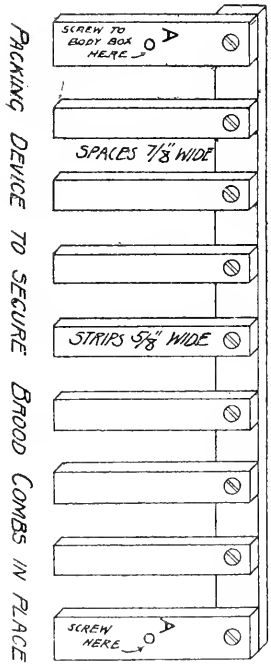
Correspondence.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

**** In order to facilitate reference, Correspondents when speaking of any letter or query previously inserted will oblige by mentioning the number of the letter as well as the page on which it appears.*

PACKING HEATHER-GOING HIVES.

[6406.] It is a little late for this to be useful for hives going to the moors, but they will shortly return and, in any case, I have found the device described here so satisfactory and so simple in operation that I cannot but think that it may be of advantage to others. It is necessary, of course, that brood combs shall not only be prevented from lifting, but also that they shall not swing much, nor slide at all towards the side of the hive, and this device is intended to prevent all movement of the combs, whilst still allowing clustering space by the removal of some of the side combs. It consists of a top-rail of, say, 7-8in. x 3 8in. stuff, to which is attached at intervals cross-bars of the usual width of the comb spaces. The device is pressed down between the end bars of the frames, and screwed to the hive end in such a manner as to press firmly upon the top-bars of the frames. This is accomplished by first pressing the device close home, and then slanting the screws required at A.A. in a slightly downward direction, which will then, as they nip finally home, make all solid. Additional screws may be used in the other cross-bars, but this appears on trial to be unnecessary. The cross-bars are glued to the top-rail and immediately screwed solid with a button head screw. This makes the device very strong. The use of it does not necessarily interfere with the metal ends, nor with the position of the combs, but in those which I have made the cross-bars were also made from 7-8in. x 3-8in., and the frames were correspondingly wide spaced for the journey. These



cross-bars would, no doubt, do equally well made from 5-8in. x ½in. stuff. It is intended that two packers be used, but in my experimental run one only was used to each hive, and a quick journey was made over rough roads without detriment.

The sketch shows device for eight frames only, as mine were made that way, the extra room being given at the sides, and filled up on arrival at the moor by thick dummies, the bees being thus crowded into the supers. The cost of the device is very small and it can be used any number of times, and occupies little space when out of use.—L. S. Crawshaw, Burnside, Ilkley, Yorks.

OUR VILLAGE BEE CLUB.

[6407.] It may perhaps interest you to hear that our village bee club, about which you were kind enough to print a letter of mine last year, still continues to flourish, and is doing its best to encourage the pursuit which we all have at heart.

We now number eighteen members, and I am glad to say that on the whole we have had a good season, though the honey-flow proved to be a short one, owing to lack of rain. It has, however, been difficult to get the bees to complete sections satisfactorily; very few were filled out to the edges, owing, I suppose, to the honey coming in slowly while they were being filled. Still, we have nothing to grumble at. My own take (by no means the largest) is ten racks of shallow frames, seventy sections and a swarm; this from seven hives. I have also succeeded in raising two Golden queens, which are now at the head of strong nuclei. I have a stock of "Long-tongued" Golden bees, but they do not appear to be very good at honey-gathering, though they are very good at stealing it, as I have found to my cost, they having cleared out a weak stock belonging to a fellow-member.

There being no flower show held in our village this year, we were disappointed of our honey show, but eleven of our members exhibited at one held in the neighbouring village of Church Lawford, and carried off a fair share of the prizes. As secretary of our club I had the pleasure of taking over eight lots of honey, and a very big job it was, to say nothing of the time it took to stage them all! I had, however, most valuable assistance from a member who gave up a day's work to help me. I only mention this to show that a bee club is of some use. We also seized the opportunity to combine the show and our annual excursion, and in the end twelve of us sat down to tea, having as an honoured guest our association's expert, Mr. Franklin, who also kindly judged the honey with his usual ability. Out of fourteen prizes in the five classes nine were carried off by our members, not so bad I think for a small club.

Last year I had two hives diseased, and as our expert did not consider it a bad case, I determined to try the effect of spraying, as did one of our members who also had a hive in the same condition. We proceeded thus:—Each frame was lifted out, and the whole, bees, brood and all, sprayed with a solution of Izal, as recommended by Mr. Simmins in his book, each affected cell being opened, and filled with the solution, in fact everything—including the hive—was soaked with it. However, the bees seemed none the worse, and the treatment was repeated at intervals of a week—in one case seven times, and in the others four and five respectively. After the second time it was thought that there was an improvement, and in the end we hoped the disease had gone, and supered the stocks. In the autumn, being suspicious of one stock, I re-queened it, and the other, I think, re-queened itself. I fed up as usual with syrup, and gave a cake of candy for the winter.

This spring our expert considered both my hives to be healthy, but about three weeks after his visit I found it developing in both hives, and also in a third. Thinking I ought to have given the bees clean hives as well as spraying, I again, with the help of the same member, got to work, only instead of Izal I used soluble phenyle, according to the directions in the "Guide Book." I got a clean hive, washed it out with the disinfectant, and transferred the stock into it. I then scrubbed out the old hive with boiling water, washed it out with carbolic acid of the strength given in the Guide Book, and set it aside to dry. At the end of a week this was repeated, the old hive being used to put the bees into, and, in addition, the combs and bees were sprayed as well. This was done three times, the whole process being gone through with each affected hive. They were then supered, with the following result: The first gave three racks of sections, the second a strong swarm and eleven sections, the third a rack of shallow frames. Now I am waiting till our expert pays his autumn visit. Do you think there is much chance of their developing foul brood, or should I have starved them for forty-eight hours first? I thought that as they must have used up the honey they brought off with them in building comb I was reasonably safe. If these stocks still have foul brood I shall put them through the starvation treatment. Has my plan of operations been on the right lines, or have I done something wrong?

My theory is that my treatment last year checked the disease, but that as the season progressed the bees filled such cells as contained spores with honey, and that as they used the honey as food in the spring the spores were set free to work their fell purpose.

As I was doubtful which racks of shallow frames had been on the affected hives, before using any of them this year I thoroughly washed my whole stock of shallow combs, and then, by means of a garden syringe, using disinfectants as before, and then boiled the metal ends for three or four hours. Would this render the combs safe for re-use?

I should not have inflicted this long account of my treatment of the disease on you, but that I am anxious to have your opinion on the one or two points indicated.

We find the club a great help in keeping

up interest in the pursuit, and besides we have been able to assist each other at times. The member referred to above as helping me, and myself drove two lots of bees out of packing cases, and successfully transferred them into bar-frame hives for two new members. All work among the bees seems to me more interesting if carried out with the help of a fellow-member, with occasional rests for bee gossip and a smoke, and when opinions differ as to the best way of carrying a job through, useful discussion is often started.—R. MEADE, Secretary, Dunchurch Bee Club, August 23

[We are glad to have your method of dealing with foul brood; it helps to show how needful it is to "go slow" in attributing value to the use of certain remedies which cannot possibly effect cures, though they may appear to have the desired effect. —EDS.]

ENGLISH v. ITALIAN BEES.

[6408.] Italian bees are certainly very good, but the trouble with them is that the hybrids, between English and Italians, are of the most unreliable temper. Sometimes they turn out more gentle, at other times the cross-breds are as vindictive as wasps, flying up to sting immediately the hive is opened. As the result of my experience with them, I have decided in future to have no more Italians.

The Italian queens specially bred may do wonderful things, but if our English queens had only the same attention bestowed on them they would give as good an account of themselves. They are too frequently bred from inferior queen-cells. If the bee-keeper really wishes to be agreeably surprised with what English bees can do, let him breed queens from the very finest queen cells only. I guarantee they will equal any foreign race, and be gentle into the bargain. For crossing purposes let him get pure English queens from distant apiaries; this will give the necessary change of blood to correct the mischief of too close in-breeding.

Our foremost queen-breeders would find it well worth while to take as much pains with the English breed as they apparently do with the foreign varieties. When I buy English queens I frequently get some sent me which are very inferior The English race of bee is not at fault; it only wants to be carefully bred. I have tried several kinds—some very good—but none are better than the English.—AJAX Cornwall, August 27.

BEES CLEANING UP WET COMBS.

[6409.] My plan of getting bees to clean up combs after extracting is to use contracting boards with holes about the size of a wine-bottle cork, close to lower edge, and place five or six combs in super and put super on top of quilts, and overhanging the back-space. The bees clean up that number comfortably in twenty-four hours, and if left forty-eight hours they repair any broken or damaged comb. Since adopting that plan I have never noticed the least disturbance amongst the bees. Then when combs are well cleaned I replace them in super-crates, and paste several thicknesses of paper top and bottom to keep out moths when not in use. By exposing combs (to be cleaned) in the open there is a decided risk of starting robbing, either with your own bees or those of your neighbours.

Nuclei or Nucleus.—Referring to "Capings of Comb," page 284, "L. S. C." is quite right—it was an inadvertence of mine. The words should, of course, have been "this nucleus," though the word seems inappropriate.

Swarms.—Mr. Woodley, in his "Notes by the Way" in B.B.J. of July 19 (page 281) questions my not being able to understand "why bee-keepers should prefer prime swarms." I find I did not say "prime" swarms. At the same time, I know that if stocks are fed specially and got to swarm by mid-May, and are then hived on built out combs while being fed up until supers are put on, and then have supers given to them with built-out combs, it is possible to get forty to seventy sections from a swarm in the season, but certainly not from the ordinary swarms of June 15 to 25. I should say, too, that any bee-keeper who sold a prime swarm at the usual price—10s. 6d. or 12s. 6d.—knowing it would give even forty sections, would be quite a philanthropist.

Weed-killer.—The cheapest I know of is: 2 oz. of carbolic acid (98 per cent.) to one and a half gallons of water, preferably hot water. This is also an excellent vermin-killer, and the cost for 120 gallons 5s., or ½d. per gallon. This will destroy even thistles and nettles, and the seeds, too.—A. H., Wavendon, Bucks, August 27.

DESTROYING WASPS' NESTS.

[6410.] I observe that your correspondent L. S. C. (page 323) has doubts about the effectiveness of cyanide of potassium in destroying wasp nests. Let him try it; place a small bit well in the entrance hole and pour some water over it; this makes the gas come off more freely. The operation can be carried out in the middle of the day, and in half an hour the nest can be dug out. This is advisable as the cyanide only kills the adult wasps; those not hatched out it has no effect on. These pests are very plentiful round our apiary at High Beech; six nests were accounted for last week, and we hear of five more, all

close at home. This has been a pretty good season in this district, 250 lb. being taken off four hives, the best hive yielding nearly 80 lb.—BELL BROS., High Beech, Walthamstow.

Queries and Replies.

[3391.] *Starting Bee-Keeping.*—I would feel greatly obliged if you would tell me how to proceed in the following case. I only commenced bee-keeping this season, and have taken over a frame-hive from my brother. This hive had not swarmed for three or four years, and during that time the bees have not stored much honey, except for their own use; they seem strong enough as regards numbers, but I notice that there are a great number of drones among them. A super was put on the hive about the end of June, but the bees are working very little in it. I have been reading all I could about bee-keeping lately, and have an idea that it would benefit the hive in question to insert new frames filled with foundation, and also either a Ligurian or Carniolan queen. If you think this course advisable will you please instruct me when and how to do it?—A. W., Leicester.

REPLY.—It appears fairly certain that there is either too much drone-comb in the hive or else that the queen now heading the colony is a drone-breeder. We therefore advise you to examine the frames in order to ascertain which of the two conditions named exists. If the combs are at fault, several of these may be removed (one at a time) in order to get good new worker-combs in lieu of them. If the queen is at fault, drone-brood will be seen in worker-cells; this will, of course, necessitate a change of queens as soon as convenient, and you will do well to leave foreign queens severely alone till more experience has been gained.

[3392.] *Bees Not Working in Sections.*—Will you please tell me the reason why my bees will not work in the sections? I bought two strong stocks on 10 frames at the end of April, and when the expert visited me he said that I should put another rack of sections on in three weeks' time, but when I looked, in three and six weeks, the section racks were still empty. I wrote asking the expert the reason of this and he said the bees must have swarmed, and that I should get the honey from the swarm. I had one swarm and hived them in a ten-framed hive with a rack of sections, and in the last week of July all the sections were still quite empty. Will you therefore please tell me what I can do to make my bees work in the sections? The "Guide Book" does not tell you. I have spent £5 10s. on bees, hives, sections, etc., and I was told (and I have also read) that one "should get expenses back the first year," but I have got no honey, yet I think there is plenty of food for the bees in Torquay.—M. P. T. (Torquay).

REPLY.—We print the above letter in full, as tending to show how difficult a task we have at times in answering correspondents who take their ideas of what bees should do entirely from what appears in books, or even from the advice given by experts who are, so to speak, on the spot. Our correspondent (who we venture to think is a lady) must not be misled either by persons or books who say that expenses (£5 10s. in this case) can be "got back the first year" from honey taken from the owners' hives. The "Guide Book" makes no such definite statements as these, it being understood that the directions given must be read in the light of ordinary intelligence. This being so, we can only say if no honey is being secreted in flowers owing, may be, to adverse weather, the bees cannot gather honey or work in the sections given to them. We therefore think it needful to assure our correspondent that if the "Guide Book" is carefully read and studied, all the necessary information for managing bees will be in the hands of its readers, but bees cannot be managed by rule of thumb, while much depends on the weather at the time. We must also request readers to bear in mind the well-known truism "bees do nothing invariably."

[3393.] *A Bundle of Queries.*—Will you kindly help me by answering the following questions in the B.B.J. and for which I thank you in advance? 1. What breed is the enclosed queen, and can you tell how old she is and the cause of her death? I found her on the alighting board the day after I had examined the hive. She does not appear to have been crushed. 2. When a hive is supered with three racks of shallow-frames, should the top ones be taken off after the third one is filled, or would it do any harm to leave them on, and let the bees continue to work with four or five racks on? If it would do no harm I would like to take all off together. 3. I have been successful in preventing swarming with all my twelve hives save one; is there any fear of them swarming when at the heather (which is about 26 miles away)? 4. If queen-cells were started and hatched at the heather, would there be any fear of old queen being destroyed by newly-hatched virgin? 5. How many frames of brood should, as a rule, be left in body-boxes when intended for the heather. 6. I have one or two hives holding twelve frames and have taken out two, thus leaving them ten frames each. Is this right? These are rather long questions, but I hope you will shorten them to suit. I enclose name, etc., but would like to sign myself —NORTHUMBRIAN.

REPLY.—1. Queen sent is an adult bee of the ordinary or native variety, and evidently fertile. Though no outward signs of damage are seen on the body, we fear the dead insect has been fatally injured while the frames were being examined. 2. It does no harm, but good, to leave racks of shallow-frames on hives as long as honey is being freely gathered in the fields; but directly the inflow ceases, some, at least, of the surplus should be removed, and all boxes taken off when honey-gathering ceases. 3. Very little fear indeed, because, as a rule, swarming for the year is over before the heather-going time begins. 4. Ten frames will be ample for brood-body at the heather. 5. Yes, quite right.

[5394.] *Transferring Bees to Frame-Hives.*—Will you kindly advise me in your next issue of B.B.J. as to management of a swarm in a straw skep. They were a late June swarm of this year, very strong apparently when I got them, as they had been hived some days before being sent on to me. I decided to leave them as they were until spring, and then transfer to a frame-hive. About the middle of July they appeared inclined to swarm, clustering outside the skep in great numbers, so put on a super, hoping the bees would do some work in it. A few days ago I took it off and found they had never been working in it at all. I then turned up the skep, and as there was brood in the combs, I concluded the bees were all right. Since then I have watched them carefully, and notice that they do not appear to be working much, very few bees going in and out, so this evening I had another inspection, thinking they might be queenless. There was a very little brood on one comb only. Do you think that the queen is old and worn out? It is quite useless my attempting to find the queen, and so I ask, would it be any use giving a young fertile queen? If you advise my doing this, please direct me how to do it in a skep? Thanking you in anticipation, I enclose name and sign—NOVICE, South Petherton, August 25.

REPLY.—From details given above it seems certain that the queen now heading the stock is old and worn out. We, therefore, advise you to prepare the frame-hive in the usual way for building-up stocks from driven bees. This done, buy a good stock of the latter with a young and vigorous queen, and when your purchase has come to hand safe, drive the bees and queen from their present hive, capture and kill the old queen, and then shake both driven lots up together in one skep, dust both lots with flour from a dredger, and throw the bees out on to a large flight-board—fixed in front of the frame-hive—and let them run in. If fed liberally during this autumn, the bees should build up into a good stock before being put up for winter.

Bee Shows to Come.

September 1, at Bramhall, Stockport.—In the grounds of the Bramhall Hall. Honey Show—under the auspices of the C.B.K.A. **Entries closed.**

September 8, at Dumfries.—South of Scotland B.K.A. 14th Annual Show of Honey, Bees, and Appliances. Five open classes—viz., three 1-lb. jars, three 1-lb. sections, and for single jar and section (free entry), and cake of wax; also handsome money prizes and valuable medals, for members only. Schedules from Jas. Johnstone, Sec., Nelson Street, Maxwelltown. **Entries close September 1.**

September 11, at Blenheim Park, Woodstock.—Annual Show of the Oxfordshire B.K.A. Open classes for single lb. section, and for single lb. jar Extracted Honey, with free entry. First prize, 10s.; 2nd, 5s.; 3rd, 2s. 6d. H. M. Turner, Hon. Sec., 4, Turl Street, Oxford. **Entries close September 6.**

September 12 and 13, at Edinburgh.—Thirteenth Annual Exhibition of Midlothian B.K.A. in Waverley Market. Open classes for six sections heather, six sections flower, six jars heather, six jars flower. Prizes, 15s., 10s., 5s. Entry, 2s. per class. Schedules from W. Weir, Heriot, Midlothian.

September 13, at Castle Douglas.—Honey Section, Dairy Show. Liberal prizes. Five open classes—viz., three 1-lb. jars, three 1-lb. sections, single jar, single section, and for cake of beeswax. Schedule from Jas. Johnstone, or from L. Aird, Hardgate Schoolhouse, Dalbeattie. **Entries close September 1.**

September 8 to 15, at the Agricultural Hall, London.—Honey Show in connection with the Confectioners', Bakers', and Allied Traders Annual Exhibition and Market. (See large advertisement on page 1.) **Open to all British Bee-keepers.** Entry fee in each class one shilling. Schedules from H. S. Rogers, Secretary, Exhibition Offices, Palmerston House, Old Broad Street, London, E.C.

September 20, 21, and 22, at Crystal Palace.—Surrey B.K.A. Annual Exhibition of Bees, Honey, Wax, and Appliances, etc. Twenty-six classes (ten open to all). Increased prizes and medals. Schedules from F. B. White, secretary, Marden House, Redhill, Surrey. **Entries close September 7.**

September 22 to 29, at the Agricultural Hall, London.—Honey Show in connection with the Twelfth Annual Exhibition and Market of the Grocery and Kindred Trades. Nearly £50 in prizes for honey and beeswax including four prizes of £4, £3, £2, and £1, in honey trophy class. **Open to all British Bee-keepers.** Schedules from H. S. Rogers, Secretary, Exhibition Offices, Palmerston House, Old Broad Street, London E.C.

September 26, at Altrincham.—Show of Honey Products, in connection with Altrincham Agricultural Show. Open to United Kingdom: Classes for Hives, Observatory Hive, 12 Jars Extracted Honey. Open to County of Chester only: Classes for Trophy, Amateur-built Hive, Two Shallow Bars, 12 Jars Run, 12 Sections, Wax, etc. Special classes for cottagers. Special classes for Society's district. Liberal prizes. Low entrance fees. Schedules from Mr. J. H. Hall, 4, Dunham Road, Altrincham. **Entries close September 9.**

October 9 to 12, at the Agricultural Hall, London.—Show of Honey and Bee Produce in connection with the British Dairy Farmers' Association. Numerous and liberal prizes for honey, etc., including the valuable Silver Challenge Cup of the B.B.K.A. Schedules from Mr. Wm. C. Young, Secretary, 12, Hanover Square, London, W. **Entries close September 12.**

October 18 to 21, at Waverley Market, Edinburgh. — Honey show in connection with the Tenth Annual Edinburgh and Midlothian Industrial Exhibition. All open classes. Beautifully illustrated prospectus, price 2d., from A. Hutchinson, 15, Leith Street, Edinburgh **Entries close September 27.**

November 9 and 10, at Chorley, Lancs. Honey Show of Lancs. B.K.A. in connection with Chorley Chrysanthemum Society's Annual Show. Four Open Classes. Exhibitors allowed to bring honey for sale. Schedules from W. G. Smith, Town Hall Auction Rooms, Chorley, Lancs. **Entries close November 3.**

Notices to Correspondents & Inquirers.

B. C. (Ascot).—Granulation of Honey.—It is, we believe, generally understood that honey will granulate more rapidly when exposed to full light than when kept in a dark place.

F. R. Sterne (Herts).—Bees not Working in Sections.—(1) It is impossible for us to say "why a strong lot of bees with a young queen have neither swarmed nor taken to sections given to them." There may be several reasons, but with only the above details to judge from we regret our inability to afford any reliable explanation. (2) The secretary of the B.B.K.A. is Mr. E. H. Young, 12, Hanover Square, London.

G. W. (Leominster).—Black Brood.—Some particulars regarding black brood will appear in a short time in our pages, but the question of "how to cure it" must, we fear, remain uncertain for some time to come.

J. S. (Peases West).—Driving and Wintering Bees.—(1) Full particulars with regard to driving and wintering bees appears in "Guide Book" (pages 138 to 140). 2. The bees should be wintered on about six frames, four of which must be well filled with sealed food at end of September.

W. P. (Blaydon-on-Tyne).—Bee Nomenclature.—Bees sent appear to be Ligurian-Carniolan hybrids. They are quite young bees, and may have been tempted out of the hive by the warmth before they were strong enough to fly.

W. D. (Winchester).—Bee Paralysis.—We cannot give you more information than what appears in "B.B.J." of August 16, pages 321 and 322.

A. H. M. T. (Leeds).—Toads and Bees.—Seeing that toads are admitted to be confirmed bee-enemies, it is taken for granted that they must be guarded against. Some bee-keepers catch and remove them to a distance; others mercilessly destroy them when found, but the difficulty of a flight-board sloping to the ground is easily got over by raising the lower side till nearly level by means of a couple of thin iron rods, up which the toads cannot climb on to the board.

Scotland (Shiskin), Arran.—Honey from Scotch Kail.—We never knew there was any difference between "Scotch kale" honey and that from cabbage or any other of the brassica tribe. It is well known that bees work very hard on these when the bloom is plentiful.

Meirionwr (Dolgelly).—Varieties of Heather.—No. 1 is the *Calluna vulgaris* (or common ling), and is the best bee-forage for heather honey. No. 2 is the *E. tetralix*, which is of no use to the bee-keeper.

Honey Samples.

G. C. (P. Wood).—Of the four samples sent, No. 1 is the best, being very good indeed on all points; and as such is suitable for any show bench. No. 2 is about the same as No. 1 in colour, but stands below it in other respects. It is a capital honey for marketing. With regard to No. 5, it is a good sample of dark amber-coloured honey; very suitable for showing in a class for "medium-coloured" extracted honey. No. 4 is of excellent flavour and aroma, but is granulating so rapidly as to make it suitable only for selling as a granulated honey.

F. B. (Wallington).—Sample is of very fair quality, good for table use, but too deep in colour for the show bench unless entered in class for honey of medium colour. Many thanks for your appreciation of the B.B.J.

Idegia (Ross, Hereford).—Without being of high quality, sample sent is quite suitable for table use. The colour is rather dark, owing to its having been partly gathered from such sources as lime, blackberry, and other autumn bee-forage.

Novgot (Yorks).—A nice sample of honey, mainly gathered from clover, and the lime blossom.

L. S. (Sussex).—Sample sent is a capital honey, good enough for any show bench. Being of deep golden, or amber, colour, and as your query is, "Is it good enough for a London show?" we say it is, but to make sure of colour (which is different in a larger jar), we should enter it in both classes—viz., light and medium—if you can stage a dozen of each.

D. J. T. (Bryn, Llanelly).—Sample is very good indeed on all points.

W. H. (Whitney-on-Wye).—The strong aroma and flavour of "Eiffel Tower lemonade" adhering to the cork and green glass jar in which sample was sent makes it impossible for us to judge either the colour, aroma, or flavour as honey. Sorry the crop in your parts is not so good this year as in 1905.

Forester (Coleford).—We regret to say your sample is very inferior in quality, being thin, dark, and watery, while the flavour makes it altogether unfit for table use. Other questions are answered at head of this column.

Disappointed (Olton).—Sample not at all bad in colour; it is bright and clear, but darkened somewhat by the bees having worked on late autumn flowers, with perhaps a little honey-dew, but not much. If allowed to granulate, it would do very well for table use.

P. T. B. (Manchester).—No. 1 would do very well for local show if warmed a little in hot water to remove the cloudiness caused by incipient granulation.

Suspected Combs.

W. D. (Ipswich).—Comb sent shows a very bad case of foul brood. Your friend should destroy the stock entirely.

C. A. (Enfield Lock).—There are traces of foul brood—in the incipient stage—in sample sent.

Bucks (Chesham).—There is no disease in either of the two samples of comb. With regard to honey sent, it is good on all points except for being rather thin, and needing straining to remove the small particles visible in sample. It will do very well for a local show.

G. E. H. (Glos.).—There is no foul brood (*Bacillus alvei*) in comb sent. Nearly all the sealed brood has reached the pupa stage; indeed, some of the young bees are alive and already hatching out while we were examining the comb.

Anxious B. (Yorks).—There is no disease in comb, which contains only drone-brood in worker cells.

R. B. D. (Horsham).—Comb is affected with foul brood of old standing. You should on no account be induced to buy the stocks offered for sale.

****** Some Queries and Replies, &c., are unavoidably held over till next week.***

Special Prepaid Advertisements

Twelve words and under Sixpence: for every additional Three words or under, One Penny.

WANTED, Situation as handy-man in apiary, garden, etc.; expert.—E. Short, Plaistow, Bromley, Kent. s 74

HEALTHY DRIVEN BEES, with Queen, 5s. per lot; also 1906 Queens, 2s. 6d. each; boxes returnable; 10th season.—A. R. MORETON, Expert, Hallow, Worcester. R 74

FINEST ENGLISH HONEY, 15s. per 28lb. tin; sample, 2d.—DUTTON, Terling, Essex. s 67

PURE ENGLISH HONEY for Sale; £2 16s. cwt. on rail. Sample, 3d.—H. HOWARD, Bassingbourn Road, Litlington, Royston, Cambs. s 67

PLANT NOW.—What offers per 100 or dozen for Toogood and Son's, Canterbury Bells? — S. HARRIS, Aberfeldy. s 54

A FEW 1906 QUEENS, 3s. 3d. each.—R. MACKENDER, Seeds and Bees, Newark. s 64

THREE GOOD MODERN HIVES, quantity new frames, sections, foundation, excluder, zinc, etc., free on rail, bargain, 30s. the lot.—MORGAN, 71, Croydon Grove, Croydon. s 71

DRIVEN BEES, 4s. 9d.; 1906 Queens, 2s.; Section Glass, 1s. 6d. per hundred; or exchange wax.—HANNAM, Highgate Road, Birmingham. s 60

TAYLOR'S GEARED EXTRACTOR for Sale, with covers, good condition, new last year. Price 18s.—HOSEGOOD, 6, The Waldrons, Croydon. s 70

WELLS HIVE, complete; swarm catcher, new skep and cap; lot £1.—PICKERSGILL, Bishop Monkton, Leeds. s 66

DRIVEN BEES FOR SALE, 3s. 6d. per lot; guaranteed healthy.—WOODING, Sutton, Sandy, Beds. s 52

WANTED, DRIVEN BEES in exchange for Buff Orpington mother and four Ancona chickens, five weeks.—MULLEY, Upton-on-Severn. s 62

FOR SALE.—One gross sections, 7s. dozen. Extracted Honey, in 14lb. tins, 56s. cwt.—ARTHUR ADCOCK, Meldreth, Cambs. s 72

DRIVEN BEES; large supply; immediate delivery; strong healthy lots, with Queen, 4s. 6d; best natural raised Fertile Queen (1906), 2s.—SOLE, Expert, London Street, Whitchurch, Hants. s 65

QUEENS, selected from honey gathering stocks.—Black English fertile 1906, 2s. 8d., free, in introducing cage: nuclei four frame, 10s.; brood combs, 7d. each; driven bees, 1s. 6d. per lb. for 4lb. lots, now ready. Light honey, 30lb. tin, 14s. 6d.; 52s. 6d. cwt. Sample, 2d.—CHARTER, Tattingstone, Ipswich. s 58

STRONG HEALTHY STOCKS.—Hybrid Italians, on 11 frames, with young queens, 20s.—THOS. WILCOX, Talywain, Monmouthshire. s 57

FOR SALE, PURE ENGLISH HONEY, light colour, also few dozen Sections. Sample, 3d.—W. J. LAW, The Cuckoo, Ashwell, Herts. s 56

WANTED, healthy stock pure Carniolans. State lowest price.—BRADBURY, Harrop Green, Diggle, Oldham. s 55

SEVERAL STRONG HEALTHY STOCKS of BEES, in frame hives, 15s. per single stock. Death of owner cause of sale.—MOULDEN, 37, Leys, Chipping Norton. s 53

HEALTHY DRIVEN BEES, 1906 Queen, 4s. per lot; 4lb. lot, and 1906 Queen, 1s. 3d. per lb.; box returned.—E. GARNER, Broom, near Biggleswade, Beds. s 51

OVERSTOCKED.—Three stocks in Abbott's Cottage Hives, all new last season, guaranteed healthy. Price, 20s. each.—4, Ealing Park Gardens, Ealing. s 50

EXCHANGE No. 2 "Brownie" Camera, in good order, for swarm of driven bees, or sell.—BORDESSA, Fannal Ash, Harrogate. s 73

SYRUP FEEDERS, "The BEST," refilled without a bee escaping, 1s. 6d., twelve 16s., free.—HARRIS, Wavendon, Bucks. s 61

LIGHT EXTRACTED HONEY, in 28lb. tins, tins free, carriage paid, 7d. per lb., cash or deposit. Sample, 3d. Special quotations to large buyers.—BOCOCK, Ashley Apiaries, Newmarket. s 59

DRIVEN BEES, guaranteed healthy, 1s. 2d. lb. Orders booked.—TIBBLE, Netheravon, Salisbury. s 60

WANTED, a SUN DIAL, in exchange for bees.—Reply SUNDIAL, "Bee Journal" Office. s 49

FOR SALE, 9 stocks of bees, 7 new hives, 5 nucleus hives, wax extractor, honey extractor, 2 smokers and 6 queen excluders, 11 shallow frames with wired foundation and racks, 4 racks sections, 2 Porter bee escapes, 1 glass bell. No reasonable offer refused.—COLLINGS, 19, Crescent Road, Bromley, Kent. s 63

CLOVER HONEY, GUARANTEED PURE.—1 lb. screw-cap bottles, 77s. gross, 21s. ¼ gross; ½ lb. ditto, 45s. gross, 13s. ¼ gross; sample, carriage paid, 8d. Also honey in bulk. Further particulars on application. Orders executed in rotation.—TURNER BROS., Sandpit Poultry Farm, Croydon. s 75

EXTRACTED HONEY, 50s. cwt.; 1lb. glazed sections, 100s. gross; carriage paid.—THE RAEBURN APIARIES, Sawbridgeworth. R 91

HONEY, finest quality, 28lb. tins, 6d. lb. Sample 2d.—H. MAY, Kingston, Wallingford. s 42

STING PROOF GLOVES, 2s.; with sleeves, 2s. 6d., post free. Why pay more?—KENT, Manufacturer, Dorchester. s 26

DRIVEN BEES, with Queen, healthy, and safe arrival guaranteed, 1s. 3d. per lb. till Sept. 15; after that date 1s.; cash with order; boxes to be returned, or charged 3s.—CHARLES H. BOCOCK, Ashley Apiaries, Newmarket. s 46

HONEYCOMB DESIGN, Crown, 1906; splendidly worked out and ready for show-bench; cheap.—C. COX, Honeycomb Design Maker, Brampton, Northampton. s 21

TESTED NATIVE QUEENS, July reared, post free, in automatic introducing cage, 2s. 6d. for cash.—CHARLES H. BOCOCK, Ashley Apiaries, Newmarket. s 45

HEALTHY DRIVEN BEES, with Queen, in 4lb. or more lots, at 1s. 3d. per lb.; boxes returnable, or will be charged for. Also Healthy Fertile Young QUEENS, at 1s. 6d. each, post free.—R. BROWN, Flora Apiary, Somersham, Hunts. s 47

HEALTHY DRIVEN BEES, with Queen, 5s. lot; fertile QUEEN BEES, 2s., per post 2s. 2d., packages free.—ROLLINS, Stourbridge. s 44

HEALTHY DRIVEN BEES, headed by 1906 Queens, f.o.r.; package free; 5s. lot.—BROWN, Expert, King Street, Wellington, Salop. s 48

YELLOW CROCUSES, slips Arabi Alpinus, 100 1s. 3d., free.—BRAYSHAW, Aultmore, Keith. s 17

DRIVEN BEES, a good supply, strong healthy lots, with 1906 Queens, 5s.; natural raised laying Queens, 2s. 6d.—T. BRADFORD, Expert, 68, Droitwich Road, Worcester. s 13

GOOD HONEY, 28 lb. tins, 6d. lb.—GEORGE THOMPSON, "Beecroft," Helpringham, Lincolnshire. s 12

BEES of my hardy prolific strain of selected workers. 1906 tested Queens, 5s. 6d. Three-frame Nuclei, with Queen, 12s. 6d. Bees, 1s. 6d. lb., for 5lb. lots or over. Packages to be returned. Guaranteed healthy. Safe arrival.—WHITING, Valley Apiaries, Hundon, Clare, Suffolk. R 94

HEALTHY DRIVEN BEES, with Queen, 5s. per lot. Package returnable. — JOHN P. PHILLIPS, Spetchley, Worcester. R 92

QUEENS, choice fertile 1906, bred from my non-swarming stocks, 3s. each; immediate despatch.—TAYLOR, Hollyhurst, Boldmere Road, Wylde Green, near Birmingham. R 75

SECTION GLAZING.—Best quality lace paper, made especially for bee-keepers' use; 100, in white pink, green, or blue, 6d., 300 1s. 4d., 500 2s. 2d., 1,000 3s. 9d., post free; lace one side, lace bands (lace both sides), white 2⅞, 3 and 3¼ wide, 100 1s. 2d., 200 2s. 3d., 500 4s.; a few in pink and blue, 100 1s. 4d., 200 2s. 6d., post free.—W. WOODLEY, Beedon, Newbury. R 27

Editorial, Notices, &c.

SHROPSHIRE B.K.A.

ANNUAL SHOW.

The Annual Show under the auspices of this Association was held in "The Quarry," Shrewsbury, on Wednesday and Thursday, August 22nd and 23rd, in conjunction with the Shropshire Horticultural Society, whose magnificent show has now become world-famous. Considerably over three tons of honey were staged, and some very fine samples were staged The Rev. T. J Evans, Rock Ferry; Mr. T. D. Schofield, Alderley Edge; and Mr. J. Tinsley, Eccleshall, officiated as judges In some classes the competition was so keen that considerable care was necessary in arriving at a decision. The Judges reported that several samples of extracted honey would have received recognition, but were spoilt by the excessive use of carbolic acid or smoke, which rendered the exhibits absolutely unpalatable through this impregnation, and they desired to warn future Exhibitors against this pernicious habit. The Artizan and Cottager Members were the greatest offenders in this respect.

The awards were as follows:—

OPEN CLASSES.

Twenty-four 1-*lb. Sections.*—1st, J. Carver, Wellington; 2nd, S. Cartwright, Shawbury.

Twelve 1-*lb. Sections.*—1st, J. Carver; 2nd, C. W. Dyer, Compton, Newbury; 3rd, A. Hamer, Llandilo.

Twenty-four 1-*lb. Jars Extracted Honey.*—1st, S. Cartwright; 2nd, J. Boyes, Cardiff; 3rd, R. Morgan, Cowbridge.

Twelve 1-*lb. Jars Extracted Honey*—1st, R. Morgan; 2nd, J. Boyes; 3rd, C. W. Dyer; v.h.c., J. Kerr, Dumfries, and H. Cleaver, Leamington; h.c. J. W. Mason, Cardiff; W. Patchett, Cabourne; C. J. Carver.

Twelve 1-*lb. Jars Medium-colored Honey.*—1st, J. Boyes; 2nd, R. Morgan; 3rd, E. R. White, Salisbury; v.h.c., S. Cartwright; h.c., A. Hamer, C. T Rouse, Tenbury.

Single 1-*lb. Jar Extracted Honey*—1st, R. Morgan; 2nd, W. J. Cooke, Binbrook; 3rd, C. W. Dyer; v.h.c, A. Hamer; h.c, J. Leech, J. Churton, Wollerton; c., S. Cartwright.

Single 1-*lb Section.*—1st, J. Carver; 2nd, S. Cartwright; 3rd, W. H. Brown; c., A. Hamer.

MEMBERS' CLASSES.

Twenty-four 1-*lb Sections.*—1st, J. Carver; 2nd, S Cartwright.

Twelve 1-*lb. Sections.*—1st, J. Carver; 2nd, P. Jones, Chelwick.

Twenty-four 1-*lb. Jars extracted Honey.*—1st, S. Cartwright; 2nd, Mrs. W. Powell, Longley; 3rd, J. Carver.

Twelve 1-*lb. Jars Extracted Honey*—1st, S. Cartwright; 2nd, J. Leach; 3rd, J. Carver; c., E. Brookfield.

Twenty-four 1*lb. Jars dark Extracted Honey.*—1st, J. Carver; 2nd, J. E. Hartshorne, Broseley; 3rd, P. Scott, Broseley; v.h.c., R. Blakemore, Bayston Hill.

ARTISAN MEMBERS ONLY.

Twelve 1-*lb. Sections.*—1st, E. Brookfield Mydale; 2nd, J. Hammond, Hope Bowdler; c., L. Powell, Longley.

Twelve 1-*lb. Jars extracted honey.*—1st, J. Churton, Wollerton; 2nd, T. H. Frost, Ellesmere; 3rd, J. Mills, Shavington; v.h.c., B. Thomas, Bella Port.

Six 1-*lb. Jars Extracted Honey.* — 1st J. Churton; 2nd, E. Brookfield; 3rd, W. Rowley, Bomere Heath; v.h.c., L. Powell, c., T. H. Frost.

COTTAGER MEMBERS ONLY.

Six 1-*lb. Sections.*—1st, J. Bright, Cardington; 2nd, J. Jones, Chelwick; 3rd, G. Butters, Blore Heath.

Single 1-*lb. Section*—1st, J. Bright; 2nd, G. Butters; 3rd. J. Jones.

Twelve 1-*lb. Jars Extracted Honey.*—1st, J. Stanton, Besford; 2nd, G. Butters; 3rd, J. Bright

Six 1-*lb. Jars Extracted Honey.* — 1st, J. Stanton; 2nd, G Butters; 3rd, J. Bright.

Six Sections Comb Honey and Six Bottles Extracted Honey (prize, a hive, presented by the Baroness Burdett-Coutts, president of the B.B.K.A.)—1st, J. Stanton; v.h.c., J. Bright; c. G. Butters.

OPEN CLASSES.

Honey Trophy.—1st, J Carver; 2nd, W. H. Brown; 3rd, A. Hamer, Llandilo; 4th, P. Scott.

Complete Frame-hive—1st, W. P. Meadows, Syston, Leicester; 2nd, Little and Cooper, Shrewsbury.

Collection of Bee-appliances.—1st, W. P. Meadows; 2nd, Little and Cooper.

Two 1-*lb. Beeswax.*—1st E. C. White; 2nd, Miss H. Radcliffe; 3rd, F. Harris, Boston; v.h.c., W. Passant, Baschurch; v.h.c., J. Lambert, Northwich; c. J. Berry.—S. CARTWRIGHT, Hon. Secretary, Shawbury, Salop.

CAMBS. AND ISLE OF ELY B.K.A.

ANNUAL SHOW.

The Annual Show of the above Association was held in connection with the Mammoth Show, held in Cambridge on the August Bank Holiday, and the result proved most gratifying, the entries being 181, as against 102 last year. The quality of the honey staged was of a very high order, and involved great care and time on the part of the Judges, Messrs. R Brown, Somersham, and Allen Sharp, Bramp ton, who made the following awards:—

Honey Trophy.—1st, J. Barnes; 2nd, F. J. Ford; 3rd. G. Hill; v.h.c., C. J. Mapey; h.c, G. E. Rogers; Special Prize for Taste in Staging, C. J. Mapey.

Twelve 1-*lb. Sections.*—1st, A. Barber; 2nd, R. Alderman; 3rd, A. E. Tollemache; v.h.c, F. Gordon; h.c., G Hills; c., J. Barnes.

Twelve 1 *lb. Jars (Light) Extracted Honey.*—1st, W. Challis; 2nd, H. M. Saunders; 3rd, J. Barnes and Jas. Lee & Son (equal); v.h.c., W. J. Cook; h.c., A. Ball and C. W. Fake.

Twelve 1-*lb. Jars (Medium-coloured) Extracted Honey*—1st, J. Short; 2nd, R. S. Askew; 3rd, A. Barber.

Twelve 1-*lb. Jars Granulated Honey.*—1st, C. Dunn-Gardner; 2nd, C. J. Mapey; 3rd, J. Barnes.

Three Shallow Frames Comb-Honey.—1st. F. J. Pollendine; 2nd, F. Gordon; 3rd, F. R. Ford; v.h.c., J. Short; h.c., C. Dunn-Gardner.

Beeswax.—1st, C. Dunn-Gardner; 2nd, F. Gordon; 3rd, G. Dellar; v.h.c., C. Catling; h.c, W. Coxall.

The Baroness Burdett-Coutts' (President of the B.B.K.A.) *Prize Hive (for Cottagers only).*—W. Challis.

GIFT CLASSES.

Single 1-*lb. Sections.*—1st, R. Alderman; 2nd, A. Barber; 3rd, A. E. Tollemache; v.h.c., G. Hill; h.c., H. M. Saunders.

Single 1 lb. jar extracted Honey.—1st, 1st, R. W. Lloyd; 2nd, W. Challis; 3rd, J. Barnes; v.h.c., H. M. Saunders; h.c., J. Lee & Son.

The Judges, Messrs Brown and Sharp, demonstrated at intervals in the Bee tent to crowds of interested spectators.—G. E. ROGERS, *Hon. Sec.*

Correspondence.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

AMONG THE BEES.

COMBS, FULL SHEETS, OR STARTERS FOR SWARMS.

[6411.] As a rule it does not pay to give a newly hived swarm fully-built-out comb, yet it does not do to be dogmatic and say: "It never pays." I have employed them this year with, I consider, good effect. Three lots of driven bees, owing to paucity in numbers, went under in early spring, and their combs, all fresh and new, were used to house English swarms, with a distinct saving of valuable time and material for the new swarms, and no loss. So that all over it was pure gain. These bees had consumed all their gorged stores en route, and so were not provided with special material for building. With a new-swarmed lot in the home apiary it is different. Their honey-sacs are full to repletion, their wax-sheet "factory" is in full swing, and the process of construction in the wax-pockets goes on automatically. The bees are hungering and thirsting for comb-building, and to hinder their desire would be a pure waste of valuable material. All this rules fully drawn-out comb out of court in competition with full sheets or starters. Not only so, but with a full flow on, bees block up the cells with honey as gathered from the fields, and soon start capping the stores, thereby blocking the queen and cramping her egg-laying powers by restricting the cell-area in which she can lay. Super room, although placed on, will generally be neglected, as the bees seem to reason it out that it is a saving of time and labour to store in every vacant cell below, to the detriment of surplus stores, and the lessening of the population of the hive. Therefore, hiving on full frames of comb must come third in order every time.

We are taught—and the teaching is wise—that we can "spare the bees" by giving full sheets of wired foundation to swarms with advantage to all concerned — bees bee-keepers, large population, finely-built combs, and extra surplus honey. A free use of foundation upstairs and down is to be commended, as a rule — but there are exceptions. I think the subject is of such importance that I would like to see a full discussion, conveying the results of experience, showing in what, if any circumstances, hiving on starters is a saving to bees and bee-keeper, because I contend, at times, it is.

First.—A strong swarm of bees in the full flush of a heavy flow generally builds so quickly that the cell surface far outruns the queen's powers of occupation. Here the sheets of foundation hurry up matters still further, and capping honey starts in the brood-frames as a serious business instead of the surplus being stored above. The queen, if prolific, may force the pace later on, and compel some honey to be uncapped and stored elsewhere, but here we have a large amount of extra work imposed on the bees, which they rather resent, because they frequently sulk and cramp the queen's powers of ovipositing. With starters only she keeps in line and hurries on comb-building, so that there is no time or opportunity to seal cells in the brood nest. So evenly balanced indeed are her powers of egg-laying and the bees' powers of comb-building that they go on as if part and parcel of one plan, to the mutual advantage of all internal arrangements.

Second.—An average swarm, building comb over the surface of nine or ten frames, has its forces spread out too much for overtaking the best and quickest work.

Concentrated on, say, six frames of starters, heat is generated with the waste of less caloric, a larger relative force is freed from constructive duties to forage abroad for fresh stores, while a further contingent can devote its attention to necessary tendance on eggs and larvæ. There is, in a word, a better division of labour at less cost of heat and tissue. A large swarm should at first receive the full complement of frames, and in twenty-four hours all not well covered with bees should be temporarily withdrawn. There is here a saving of foundation with, I think at times, an acceleration of work.

Third.—So many novices, and others, insert half or quarter sheets of foundation so carelessly that combs are badly built, while with some only of these inserted the added weight of bees hanging from them causes even good foundation to sag and stretch, resulting in badly-shaped cells, frequently almost oval in form. Starters in such a case prove not only true economy but a distinct gain, as far more regular combs are obtained, which prove a valuable asset in the future history of the colony.

Fourth.—But these quarter, half, or three-quarter sheets may frequently give way, causing not only a nasty breakdown, but a distinct loss of foundation and honey, and a very considerable consumption of valuable time. Nothing is more aggravating than discovering, after two or three days of hard and indefatigable work on the part of the bees, that all their toilsome labours have ended in nought, and that it has to be all tediously gone over again. If badly inserted, full sheets are even worse.

These are only a few sample cases, which could be very largely added to by every bee-keeper who hives a large number of swarms. The restricted area of, say, six frames, gives bees comb-building for about ten days after hiving, and during that time it seems to me to be an almost universal rule that bees construct only worker-cells. So here we have, with starters only, the best possible comb built, with no drone cells. But, as I have noted above, a further benefit follows. With a good heavy flow on, many workers are set at liberty to forage, and part of this material, if stored, would block the brood-body, so almost from the first a rack of sections should be given above to supply room for this overplus. At—or about—the end of the ten days, more frames may be added, but these should, in general, be furnished with full sheets of foundation. In using starters one sheet provides five frames, which means a considerable saving.

The chief dread with many is that when only starters are provided bees build too much drone-comb. That is so when the whole set of frames are given to even a strong swarm. But when about four of a ten-frame hive are withdrawn a day after hiving, the restricted room enables the queen's egg-laying and the workers' comb-building to keep pace, while the super-room above hinders any thought of hurrying on large cells for storage or drone-rearing. Those who find this being done might try close spacing, which very effectually prohibits the building of drone-comb. If every alternate frame has its W.B.C. ends drawn back, so that only every second frame has its metal ends acting as spacers, the bees build only worker cells. Of course, these should be replaced in their true position giving a regular double bee space between each comb.

Second swarms, or first swarms headed by young unfertilised queens, can be trusted to build only worker cells, while the same may be said safely of nucleus hives, to which only starters have been given, and indeed, of any lot of bees reduced to a small number of frames, if bees are not too numerous. Such a lot may be kept on building such combs if frames of brood are withdrawn to keep them from becoming too strong. — D. M. M., Banff.

A BEGINNER'S BEE NOTES FOR 1906.

A SUCCESSFUL START.

[6412.] Possibly a few brief notes of a one season bee-keeper's success may be of interest to those about to commence in this most interesting occupation, provided you think it worthy of a place in your pages. A short account of one of my two hives appeared in your query column on May 24 (3298, page 206). The hive there mentioned was, evidently, successfully re-queened, for six and sixteen days after the query referred to was written the combs were well filled with eggs and brood, sealed and unsealed; not only so, but the stock eventually gave me between eighty and ninety pounds of clear amber-coloured honey of a beautiful aroma and flavour.

My second stock, purchased from a local expert, and was alive with wax-moth, yielded about thirty pounds. On August 4—though I know nothing whatever of the operation of "driving" beyond what I had read in your invaluable (and to my opinion *indispensable*) "Guide Book"—I drove two lots of "condemned" bees—one a swarm, and the other a "cast" from the same hive—brought them home in two skeps, joined the two lots together by emptying one into the other, and "shaking them up like peas," and, finally threw them on to a sheet in front of a W.B.C. hive and let them run into it. I had previously fitted the hive with eight sheets of wired foundation. This lot I fed liberally for some days, then

more slowly, and on the 20th inst. the combs were well filled with sealed brood. I had left the queens to "fight it out." I should like to say for the encouragement of your querist H. G., Bucks, (No. 3380, page 317) that he will have no difficulty in transferring his stocks if he follows "Guide Book" directions. I found it an advantage to pin a strip of calico, about eight inches wide, at the back of the skeps where the edges join, this will prevent the bees "boiling over" the sides of the full skep. "Blanket" pins will be the best to use. Since my first attempt at driving I have repeated the operation, but in hiving, I threw the bees on to the top of the frames, and prefer that method.

I should strongly advise any beginner to thoroughly protect himself from stings. I am obtaining 11d., 10d., and 9d. a pound for my honey, according to the quantity taken, and conclude by wishing all bee-keepers as successful a year as I have had. —CAMBIST, Stamford, August 24.

BUYING DRIVEN BEES.

FOR BUILDING-UP STOCKS.

[6413.] There is a prejudice among many bee-keepers against driven bees because they consist largely of old and worn-out workers. As a matter of fact, however, driven bees, properly fed and cared for, breed with such vigour until quite late in the autumn and winter so well that they make, in my belief, far better stocks for the following season than any others, having such an enormous population of *young* bees.

I have this season sold far more driven bees to former customers, who have proved their value, than to new customers. The enclosed specimen from many letters I have received may interest readers if you have room to spare in your pages. To avoid risk of soliciting a free advertisement I send name, etc., and sign — ADVERTISER, August 21.

"DEAR SIR,—On September 14 last year I received from you two lots of driven bees, which have done rather well considering the reputation some people give to bees obtained in this way.

"I had both lots hived on arrival, and at once commenced to feed through a Canadian feeder as fast as the bees would take the cane-sugar syrup down, until both lots were established on six frames, with between 25 lb. and 30 lb. of food in each. I then covered all warmly down and left them alone until December, when on a fairly warm day I looked in and found all well, and again closed up until January, when I gave to each lot a 2-lb. cake of candy, and kept this going until May, when I received a visit from the expert, who reported favourably on all he saw. You will be pleased to know I have already had 80 lb. from one lot in shallow-frames, with a rack of 24-lb. sections now on, and from the other have obtained twenty-seven good sections, and expect to take twenty-seven more in a day or two—not at all a bad beginning even with 'driven bees.'

"I now ask: Can you supply me with more of the same sort, and I, at least, shall not grumble?

"Since writing you on August 2 I put on eight shallow-frames, to be cleaned up after extracting, and have been unable to remove them until this week-end, when to my surprise I find them not 'cleaned up,' but with 27½ lb. of honey in, and all sealed, which brings my total for the larger take off the one hive under-estimated at 100 lb., so I can tell you I am more than pleased."

BEES AT THE HEATHER.

[6414.] I felt rather disappointed with my B.B.J. this week. I did think some one would have said something about the all-important question of heather prospects just now. I felt I could not let another week pass without sending an "Echo" on the subject. I was at the moor where are now located ten hives on September 1, and the way honey had come in since the hot weather started is most remarkable. A rack of twenty-four sections put on less than a week ago, were almost worked out and completed. I can hardly keep pace with the bees in giving more super-room; but they seem in such a hurry to get rid of their loads that they drop most of the honey in the brood nest, the combs there being simply clogged up with honey, so that vigorous young queens put in just before the hives were sent to the moors are crowded out from egg-laying in hives that had empty supers on till last week; while in another hive, headed by an old queen, the bees had crowded her on to a patch of comb as big as my hand. Unless the queens do some breeding after they get home, I look forward to having some hives full of honey and very few bees next spring. But the mischief does not end at the heather. I have three stocks at home, the bees of which have found their way to the moor (though it is quite five miles from here), and they also are crowding the queens out of brood-nests in the same way. It seems as if bees can travel many miles on these hot, calm days we are having. I tasted heather honey quite plainly in a hive at my home apiary at Pilsby last Friday night, on a bit of new comb built-out during the last fortnight. I bought 1 cwt. of sugar a week or two ago, to feed up with at home; but I fancy that sugar will not

be required for bee-food if the hot weather keeps on. I am wondering if the bees of our Scotch friends are doing as well as mine; if they are, they will be having a record year for heather-honey.

Referring to the question of three queens laying in one hive (page 343), a friend of mine had three young queens on one frame in an observatory hive at Clay Cross show for two days, and he saw two of them moving about quite comfortably together several times. They were put in separate nucleus hives after the show, and they are now laying grandly. Hoping these few lines will make interesting reading.—TOM SLEIGHT, Chesterfield, September 3.

THE LATE HONEY SEASON.

PREVALENCE OF THE BRAULA COECA ON QUEENS.

[6415.] The honey season here has been the latest that I ever remember. Usually the honey-flow is over by the third week in July, but this year I have noticed supers being slowly filled nearly up to the end of August.

I was surprised to read (on page 272) of what a poor season our friend "D. M. M." was having, while I had just been reading, in a back number of "B.B.J." (October 5, 1899, page 395), an account of a marvellous yield of honey he had secured that year from a four-pound English swarm.

What has become of the new artificial comb invention? I thought that we were going to enjoy the discovery this summer and be rid of split or grooved top-bars with its nuisance of moth grubs.

In my article in "B.B.J." of July 12 (page 272) the sentence (in third paragraph) "and wholly prevents swarming" should have been "and *usually* prevents swarming." And as to the inquiry re number of brood frames, I may repeat that the queen on one comb of brood with nine frames of comb foundation is left below, whilst nine combs of brood and one frame of foundation is placed above, with an excluder between. So that the queen has had the use of nineteen frames, and, as I have before stated, it usually prevents any desire to swarm. I must say that I like this way of working hives above all others, because a rack of sections may be first secured for the early market, and the extra chamber for extracted honey follows later. Moreover, bees store honey more willingly and faster in frames than in supers. Also, in a foul-broody district (and there is more foul brood about than people are aware of) the brood combs can be thus renewed every year if desired. I should like to give my idea of the most economical and profitable way for a novice to commence bee-keeping, and, if our Editors will find room and not consider me a bore, I will furnish such an article for next week's "Journal."

Has anyone noticed how very prevalent has been the red or blind louse parasite on queens this season? I have noticed some queens only three weeks old covered with these vermin.—AMATEUR, Cheltenham.

P.S.—I am wondering what sort of a swarming season our good friend Wm. Woodley has had. Whether he has had many mix-ups; and if the cold, backward spring has prevented him from supplying all his numerous customers?

HONEY EXHIBITING AT LONDON SHOWS.

EDITORIAL ENCOURAGEMENT.

[6416.] I find that the enquiry I made through your columns as to the quality of my honey has drawn some remarks from your correspondent, Mr. S. Jordan (6398 page 326), which, but for your admirable footnote to his letter, would imply that you discouraged me and other country bee-keepers from competing in London shows. No man who understands bees or honey would be so discouraged, but would strive for all he was worth to win. I sincerely thank you for your reply to me on page 320, and will tell you what it has done. In July I was showing at a large flower show where there was keen competition in the honey classes. The judge (a provincial man) did not give me an award at all. He said my honey was perfect in every respect but flavour, but that this was spoilt by bees gathering from sycamore and hawthorn. I felt convinced that he was wrong, and that it was mainly from clover, so sent a sample to the B.B.J. office for your decision. Had it not been for your answer in B.B.J. I would have been disheartened, and should not have shown the honey any more. Encouraged by your reply, I entered it in three shows, and was awarded first on every occasion. I will be competing in the London shows, no doubt, as your knowledge and experience prompted you to pass your opinion that our particular (Midland) district was not quite so good as many—at least, this year, from the sample I sent you. I have yet the ambition to win at a London show, and, being young, I have plenty of time to do it yet. I hope to become more closely allied with the B.B.J. and its Editors, also with the B.B.K.A., as through reading your journal I have been fired with enthusiasm for bee-keeping, and am determined to try my luck on a London show-bench.—C. L., Lincs.

WEATHER REPORT.

WESTBOURNE, SUSSEX,
August, 1906.

Rainfall, 1·54 in.
Heaviest fall, ·52 in. on 16th.
Rain fell on 9 days.
Below average, 1·09 in.
Sunshine, 238·1 hours.
Brightest day, 3rd, 13·1 hours.
Sunless days, 0.
Above average, 23·4 hours.
Maximum temperature, 84·5° on 31st.
Minimum temperature, 44° on 20th.
Minimum on grass, 42° on 20th.
Frosty nights, 0.
Mean maximum, 71·2°
Mean minimum, 54·8°
Mean temperature, 63·0°
Above average, 3·0.
Maximum barometer, 30·40 on 28th.
Minimum barometer, 29·66 on 14th.

L. B. BIRKETT.

AUGUST RAINFALL.

Total fall, 2.32 in.
Heaviest fall, .45 in. on 1st.
Rain fell on 17 days.—W. HEAD, Brilley, Herefordshire.

CAPPINGS OF COMB.

By L.S.C., Ilkley, Yorks.

Uniting Driven Bees (p. 326).—I would clench Mr. Woodley's good advice to "remove the old queen" by going further, and saying that, in my opinion, the old queen, *if laying*, is almost certain to be retained at the expense of the travelled young queen which is *not* laying. At least, I believe that to be the reason of their choice; and as it has always worked that way with me I take no more risks.

Difficult Judging (p. 327).—Judging is a thankless task anyway, and it is perhaps not unreasonable that "Smith and Brown" taking first and second at one show, should find the position reversed at the next. Where judging is very close, the merest trifle may turn the scale. For instance the slightest damage in transit from show to show might comparatively disparage or otherwise a tip-top comb-honey exhibit. A tiny weeping might be noticed by the judge which had escaped the exhibitor. It is also conceivable that the staging or the better light might affect an award which, however carefully given, is *finally* a matter of personal judgment; and judges are not superhuman or infallable, but perhaps, like the bees, "do nothing invariably." By the way, I am getting a bit tired of that expression!

Influence of Race (p. 333).—It seems impossible that any race should persist in any apiary in spite of the bee-keeper's efforts to extirpate it. Has he tried excluder traps for all undesirable drones, and entirely re-queening from stocks headed by pure, unrelated queens?

Extracted (p. 334).—Is not the comparison between the needle and the bee's sting rather exaggerated here? The wasp's sting must be still finer, as it seems to do its work a great deal quicker. I only speak from experience!

Bees Carrying Wax (p. 334).—These present a peculiar appearance. The wax is not packed tightly like pollen, but the "mouthfuls" are piled up in the corbiculæ in such fashion that it is difficult to see how they remain in place at all, after the entrance to a crowded hive.

Prime Swarm with F.B. (p. 336).—This is unusual, is it not? Was it hived on foundation in a clean hive, I wonder?

Sane Words (p. 343).—Might not the queen-breeder keep track of the honey qualities of his stock by offering re purchase premiums for those queens which did the best in actual practice?

Black Brood (p. 343).—The Americans seem doubtful whether our foul brood is the same as their own. One well-known writer (W. Z. Hutchinson, in the August "Review") now describes black brood as the same as European foul brood; but his description of the scale does not tally.

Three Queens in a Hive (p. 343).—Apparently there is no limit to the number of fertile queens which might be in a hive under supersedure conditions.

Swarms (p. 346).—"A. H." says that a mid-May swarm, hived on built-out combs, specially fed until supered with built out comb, may possibly yield forty or more sections. Then he criticises a bee-keeper who will sell such a swarm for even 12s. 6d., knowing that it will give forty sections. This is hardly fair arithmetic, is it, friend "H."? I am asked 15s. and carriage extra for such swarms "by mid-May," and then do not get them! But what about the other contributory conditions? Do *they* cost nothing? And are there no bad years for even such reasonable and carefully tended purchases?

Destroying Wasps' Nests (p. 346).—If I ever had any doubts as to the effectiveness of cyanide of potassium they are now entirely dispelled. I would thank Bell Bros. for the tip as to wetting the cyanide. I tried this with a strong nest, placing some lumps in a spoon containing water, and an hour later dug up the nest with impunity.

I have also just taken a nest of the wood-wasp (*V. media*) which was built in a gooseberry bush, by the expedient of covering the bush entirely with a sheet, and burning a gunpowder-paste squib underneath. But for *V. vulgaris* the cyanide is much more satisfactory than a squib. The fumes penetrate much more effectively, and the en-

trance need not be stopped. I once made a powder-paste squib, and put it into a smoker to ensure that the fumes should be puffed right into the nest. You know the rest, of course! Don't tell anyone!

Queries and Replies.

[3395.] *Dealing with Foul Brood.*—I should be very pleased if you would answer the following questions in the "B.B.J.": (1) Is there any danger in outdoor feeding where foul brood is in the neighbourhood if the syrup is medicated with naphthol beta? (2) In 1904 I found what I thought to be two cells infected with foul brood in the coffee-coloured stage in one of my hives. I cut these two cells out, and, as I always do with all my stocks, fed with medicated syrup, and kept naphthaline in the hive. During 1905 I saw no signs of the disease at all, but in June of this year I found two more cells infected and removed and destroyed the comb altogether, and since then they seem perfectly healthy. I am fairly well acquainted with foul brood, but should like to know if you think it possible that they can have foul brood, or the germs of foul brood in the hive, as the bees are on the same combs as in 1904. Is it necessary to boil for two hours such appliances as rapid feeders, etc., and metal ends used with infected stocks? (4) Would it be too late to re-queen at the present time by killing off the old queen and letting the bees raise one for themselves? Drones are still in the hives.—J. C. T., Leicester, August 22.

REPLY.—(1) We do not think so, if the bees can be guarded against starting to rob each other's hives. The free-feeding should be done some distance away from the apiary, say, forty or fifty yards. (2) It is, of course, possible, but not at all probable. (3) No. (4) Yes; the end of August is too late for bees to start queen-raising for themselves. The difficulty of safe mating makes it altogether too risky.

[3396.] *Ridding Hives of Braula Cæca.*—Being in need of advice, I again appeal to you for the help which is so generously given in the "B.B.J.," especially as I believe the clearing up of the points mentioned will be of general interest. On Aug 16 I examined one of my stocks, which was found to have no eggs or brood with the exception of one patch (sealed). This hive is one of my strongest stocks, and has always yielded the best honey results, this year being no exception. I noticed the queen had several braula cæca (or blind louse) on her, and so I ask: 1. Is this sufficient to cause her to cease laying? Having been frequently troubled in the same way before, and the queen ceased laying, I wondered if you could give any method of ridding hives of this pest beyond that on page 160 of the "Guide Book." The hive in question was new this spring, and for the queen to cease laying so early seriously weakens the stock for next year. 2. I supered two of my stocks in the same manner, and at the same time, with shallow frames, but the honey from one was cloudy when extracted and three weeks after was candied. Can you tell the reason of this, and how to avoid it, as the other stock produced some of the clearest and best honey I have ever seen. 3. How long do you consider that frames should be used in the brood-chamber before being melted up? Of course, some hives have been more bred in than others, but can you give some general idea when a comb has been, say, in the middle of the hive all the time.—Name sent for reference. W. A. T., East Devon.

REPLY.—There is no more effective way than that mentioned. 2. You cannot control the foraging bees, and some will frequently visit entirely different flowers to other stocks in the same apiary. 3. About five years use is, we consider, quite enough, and if a couple of frames are renewed each year it assists in keeping all in good, healthy, workable condition.

[3397.] *Removing Bees from Box After Transferring.*—I have taken in the B.B.J. nearly seven years, and have, as a rule, always been able to find a way out of a difficulty by looking up back numbers; but this time I cannot find what I think would help me, so I ask for your help in the following:—Two years ago I had a swarm, and the bees were hived temporarily in a cube-sugar box, but owing to my illness they were left in the box all winter. In May this year, however, I put the box on the top bars of a frame hive, thinking that the bees would transfer themselves below, but they have so far only drawn out four combs, which are now well covered with bees, and the queen is evidently laying there. I should therefore like to remove the box, as I fancy there is a lot of honey in it, as the box is very heavy. Will you therefore please tell me in this week's B.B.J. how to take the honey? There was a feed-hole cut in the top of the box, but all the other parts are nailed on. Could I remove one side of the box and smoke bees down, so that I could cut out the comb? I am a member of the Essex B.K.A., but have happened to be away from home each time the expert called. The last time he called he left word to say the bees were going on all right. I shall be very thankful for any advice you can give me with regard to this hive. I might say I have now only two stocks, as the expert advised me to destroy the others owing to an outbreak of foul brood.—A. H. F., Grays, Essex. Sept. 1.

REPLY.—The box should be gently prized up a little, so as to allow of a wedge—cut from a broken section—being slipped in at each corner. Blow a little smoke in at the junction of the old box and the hive-body; then, with a screwing motion, lift the box off and set it on a board, so that no bees can get out. Then examine the frames in lower hive, and see that either the queen is there or eggs and brood in the comb. Cover the body-box down, and remove the box with bees and honey to a distance away—thirty or forty yards if convenient—and turn it bottom upwards, thus allowing the bulk of the bees to fly back home. Repeat this operation at

intervals, covering the bees with a cloth for a few minutes at a time, then releasing them, till all, or nearly all, have left the box, when you can deal with the combs and honey by cutting out after the bees have left and gone home

[3398.] *Transferring Bees and Combs from Skeps.*—On August 24th I transferred the contents of six straw skeps into three frame-hives, putting two lots of the bees together in each case. I selected the best of the comb from the skeps and filled five frames with this comb, which contained a small quantity of brood and was well stocked with honey and pollen. The other two frames are filled with full sheets of foundation. I am feeding them at the side of the hive (inside) with the odds and ends of the honey to endeavour to get the bees to also build out foundation, and fill it with food. When fitting the old combs into the frames I used sticks to keep the combs in position in the frames which latter are wired. I shall take the sticks away when the combs are firmly fixed. In view of what has been done, I ask: 1. Will the five frames of comb and two of foundation to each hive be sufficient, or will it be better to have more? 2. Do you think the bees will do all right if kept warm on top, and is there a reasonable probability of their coming out as strong stocks in the spring?—H. M., Croydon, August 28.

REPLY.—1. Seven frames of comb will be ample for wintering the bees on, to use more would be a disadvantage. 2. There is no reason why the bees should not do well if well packed and headed by young prolific queens. At the same time, we do not approve of transferring old combs to new frame-hives. Had our advice been sought before transferring, we should have recommended you to adopt the plan of wintering part of the stocks in the skeps and allowing the bees to transfer themselves to the frame-hives in spring. You would then have had the chance of comparing results of the two different methods of transferring.

[3399.] *Making Artificial Swarms in Autumn.*—As a reader of the "B.B.J.," I should be pleased if you will inform me how to manage one of my stocks of bees which has not swarmed this year, and yet is packed with bees between the inner and outside cases of the hive, both back and front, and is building comb in both places? I cannot turn the quilts back without pulling bees out. 1. Is it possible there are two queens in the hive to cause this? 2. Could I make an artificial swarm by placing a box fitted with combs and foundation over the quilt: and then, if they fill the box, remove it and the bees as a swarm, then introduce a fertile queen to the bees at night? 3. Would 4lb. of driven bees with queens make a stock and winter alright if hived the third week in September? I have just looked at the bees in the crowded hives, and they seem very like as if starting "robbing."—T. R., Sheffield.

REPLY.—No, it is quite impossible to explain the condition in this way. 2. You must on no account try to make an artificial swarm at this season, as proposed. 3. Yes, if you quite understand how to build up a stock from driven bees, but it is very late to operate so late as the third week of this month.

Bee Shows to Come.

A nominal charge of 2s. 6d. is made for notices (not exceeding 7 lines) in this column, 10 lines charged 3s. 6d.; up to 15 lines 5s., which covers cost of insertion from order till date of show. Cash should accompany orders for insertion.

September 8. at Dumfries.—South of Scotland B.K.A. 14th Annual Show of Honey, Bees, and Appliances. **Entries closed.**

September 11. at Blenheim Park, Woodstock.—Annual Show of the Oxfordshire B.K.A.—**Entries ciosed.**

September 12 and 13, at Edinburgh.—Thirteenth Annual Exhibition of Midlothian B.K.A. in Waverley Market. Open classes for six sections heather, six sections flower, six jars heather, six jars flower. Prizes, 15s., 10s., 5s. Entry, 2s. per class. Schedules from W. Weir, Heriot, Midlothian.

September 13, at Castle Douglas.—Honey Section, Dairy Show. Liberal prizes. Five open classes.—**Entries closed.**

September 8 to 15, at the Agricultural Hall, London.—Honey Show in connection with the Confectioners', Bakers', and Allied Traders Annual Exhibition and Market. (See outside cover advertisement. **Open to all British Bee-keepers.** Entry fee in each class one shilling. Schedules from H. S. Rogers, Secretary, Exhibition Offices, Palmerston House, Old Broad Street, London, E.C.

September 20, 21, and 22, at Crystal Palace.—Surrey B.K.A. Annual Exhibition of Bees, Honey, Wax, and Appliances, etc. Twenty-six classes (ten open to all). Increased prizes and medals. Schedules from F. B. White, secretary, Marden House, Redhill, Surrey. **Entries close September 7.**

September 22 to 29, at the Agricultural Hall, London.—Honey Show in connection with the Twelfth Annual Exhibition and Market of the Grocery and Kindred Trades. Nearly £50 in prizes for honey and beeswax including four prizes of £4, £3, £2, and £1, in honey trophy class. **Open to all British Bee-keepers.** Schedules from H. S. Rogers, Secretary, Exhibition Offices, Palmerston House, Old Broad Street, London E.C.

September 26, at Altrincham.—Show of Honey Products, in connection with Altrincham Agricultural Show. Open to United Kingdom: Classes for Hives, Observatory Hive, 12 Jars Extracted Honey. Open to County of Chester only: Classes for Trophy, Amateur-built Hive, Two Shallow Bars, 12 Jars Run, 12 Sections, Wax, etc. Special classes for cottagers. Special classes for Society's district. Liberal prizes. Low entrance fees. Schedules from Mr. J. H. Hall, 2, Dunham Road, Altrincham. **Entries close September 9.**

October 9 to 12, at the Agricultural Hall, London.—Show of Honey and Bee Produce in connection with the British Dairy Farmers' Association. Numerous and liberal prizes for honey, etc., including the valuable Silver Challenge Cup of the B.B.K.A. Schedules from Mr. Wm. C. Young, Secretary, 12, Hanover Square, London, W. **Entries close September 12.**

October 18 to 21, at Waverley Market, Edinburgh. — Honey show in connection with the Tenth Annual Edinburgh and Midlothian Industrial Exhibition. All open classes. Beautifully illustrated prospectus, price 2d., from A. Hutchinson, 15, Leith Street, Edinburgh. **Entries close September 27.**

November 9 and 10, at Chorley, Lancs.—Honey Show of Lancs. B.K.A. in connection with Chorley Chrysanthemum Society's Annual Show. Four Open Classes. Exhibitors allowed to bring honey for sale. Schedules from W. G. Smith, Town Hall Auction Rooms, Chorley, Lancs. **Entries close November 3.**

Notices to Correspondents & Inquirers.

VARIETIES OF HEATHER (Stockton-on-Tees).—THOS. WILCOX (Talywain, Mon.). J. W. GIBSON, and J. W. COOK (Suffolk).—Send samples of bloom of the *Calluna vulgaris*, or common ling, which is by far the best heather for bee-forage and yields the genuine heather honey so highly esteemed.

CALLUNA VULGARIS
(Common Ling).

P. A. J. WATSON (Sussex, J. W. (Notts), and three other correspondents send sprigs of bloom from the above-named heath, *Calluna vulgaris*, along with samples of *Erica Cinerea*, or bell-heather. We therefore insert illustrations of both varieties of heather so that there may be no mistake made by correspondents and bee-keepers, generally, as enabling them to judge for themselves with regard to the best bee-forage for heather honey.

ERICA CINEREA
(Bell-heather).

B. E. C. (Devon).—Bees Attacking Neighbours.—If your neighbour can prove that your bees are a danger and a nuisance to him when on his own premises, thus depriving him of what is, in legal phrase, termed "peaceable possession," you may be compelled to remove them. On the other hand, it must be shown that the bees have caused the real ground of complaint, and that the complainant is not needlessly afraid of being stung or otherwise damaged.

Honey Samples.

T. G. R. (Maidstone).—1. Your sample of extracted honey will do very well for the show-bench at the shows mentioned as taking place at the Agricultural Hall, on September 8 and 22 respectively, if entered in the class for "medium coloured extracted honey." 2. The honey from broken section is poor in flavour and aroma, from bees having gathered from what we think is the weed known as "rag-weed" (or more properly Rag wort).

G. E. H. (Glos.).—Sample is very good on all points as a "light coloured" extracted honey. It will do very well for showing at the show referred to, held in London. Letter came too late for reply last week.

L. C. POLLARD (Norwich).—Sample is an excellent light coloured honey, very suitable for the London shows mentioned.

J. K. (Cheshire).—1. Sample is good honey a bit spoilt by an admixture of honey dew. It is quite suitable for table use. 2. Glad to hear you find our papers most instructive as well as interesting. We try to make them so.

G. T. HERN (Croydon).—Sample is "medium" in colour, bright and clear, but is rather rank or coarse in flavour (see reply to T. G. R. above).

H. C. M (Collingham).—We cannot judge honey sent in a bit of old dark comb cut from a skep. However, it seems to be fair in flavour, and is certainly eatable if you do not mind its appearance.

Suspected Combs.

J. R. W. (Sutton-on-Hull).—We regret to say all three samples of comb are affected with foul brood in pronounced form, and it is quite certain that the bee-keepers to whom you refer cannot be "Experts" or they would at once recognise the disease in sealed cells. The fact of your being "a novice at bee-keeping" compels us to advise you not to try and cure three stocks of bees all diseased at this season. It would mean much labour and anxiety for you, and the task is quite beyond any but an experienced bee-keeper.

W. D. (Lancs.).—Comb sent is in a very bad state, such as should not be tolerated in a well-kept apiary. There is foul brood of old standing in a few cells, but some brood is hatching out. The comb appears as if the stock had been "robbed out" by the bees of other stocks.

T. P. (Croydon).—There are signs of F.B. in comb, but only in the incipient stage, and as the colony has re-queened itself there seems a good chance of the remedial measures taken being successful.

***** Some Queries and Replies, &c., are unavoidably held over till next week.***

Special Prepaid Advertisements

Twelve words and under Sixpence: for every additional Three words or under, One Penny.

FOR SALE, fine Extracted and Comb HONEY, in bulk. — T. PULLEN, Ramsbury, Hungerford. s 88

WANTED, TO HIRE, HONEY EXTRACTOR, for week.—Wentworth House, George Lane, Wanstead. s 77

GOOD, STRONG, HEALTHY STOCKS of BEES, in Frame Hives, 20s. to 30s. Extracted Honey, 50s. cwt.; 1-lb. jars, 7d.—H. WILSON, Livermere, Bury St. Edmunds. s 70

BROOD COMBS, suit driven Bees, healthy, 7d. each. Honey Tins, 30-lb. capacity, lever lids, extra strong, 8s. dozen. Light Honey Screw-cap Jars, 6s. 6d. dozen; gross, £3; 50-lb. Tin, 14s. 6d.; cwt., 52s. 6d.; sample 3d.—CHARTER, Pattingstone, Ipswich. s 78

DRIVEN BEES.—Immediate delivery, 30 lots, with fertile Queens, at 3s. 9d.; 1906 fertile Queen, 2s., per post; guaranteed.—W. SOLE, Expert, London Street, Whitchurch, Hants.

HONEY FOR SALE, about 5 cwt., at 5d. per lb. Sample free.—A. BONELL, Witley Court Gardens, Stourport. s 80

STOCKS OF BEES FOR SALE, singly or otherwise; moving.—WARD, Ludborough, Louth. s 81

HEALTHY DRIVEN BEES 5s. lot. Boxes free.—H. KEMP, Frome, Somerset. s 82

TWO FRAME HIVES FOR SALE, empty, 5s. each; good makers; reason for sale, moving.—SULLIVAN, Rivermede, Harpenden.

WANTED, to exchange good rook rifle for Honey or Bee appliances, value 30s.—Particulars from E. STOREY, Hertford, Herts. s 85

PERFECT COMBS, from Foundation and Driven Bees, by using "Nondescript" device. Cannot stretch. Better than wiring. 20 years' proof in large apiary. Sample, 7 stamps. Full set for one frame, 13 stamps.—PALMER, Hayton, Retford, Notts. s 89

EXPERIENCED EXPERT seeks SITUATION as All-round or Handy Man. Fair amateur joiner and hive maker.—W. PALMER, Hayton, Retford, Notts. s 88

2,000 LBS. LIGHT ENGLISH HONEY, £3 and £2 16s. per cwt. Quotations bulk. Sample, 3d.—ALBERT COE, Apiary Midl, Ridgewell, Halstead, Essex. s 97

WANTED, HEATHER HONEY PRESS, reliable make; good condition.—METCALFE, Pannal, Leeds. s 96

STOCKS IN SKEPS, 1906 Queen, plenty natural stores, 12s. 6d., 15s. 6d. Stocks on four frames, brood and stores, 10s. 6d.; 1906 Queen. Orders booked for driven bees, 6s., with Queen. Despatch in few days.—W. WOODS, Normandy, Guildford. s 95

QUEENS, choice fertile 1906, bred from my non-swarming stock, 3s. each. Immediate despatch. —TAYLOR, Hollyhurst, Boldmere Road, Wylde Green, near Birmingham. s 94

SELL OR EXCHANGE for Driven Bees, Bell Glass Super, Shallow Frame Super, for Skep, ten frames, and roof, complete; 9s. 6d. or exchange.—A. DOWNING, Bank Street, Mexborough. s 93

DRIVEN BEES, guaranteed healthy, with fertile Queen, 1s. 2d. lb. Honey, 55s. cwt.—TIBBLE, Netheravon, Salisbury. s 92

PURE ENGLISH HONEY, 28-lb. tins, 12s.; also Sections, 7s. per dozen; carriage paid. Driven Bees, 4s. per lot.—BLAKE, Cruwyshayes, Rackenford, Witheridge, Devon. s 91

CLOVER HONEY,, £2 16s. per cwt.; packed free. Sample, 2d.—COMLEY, Fairford, Glos. s 90

HONEY, fine quality, 56s. per cwt.; two cwt. and above at 53s. Sample, 3d.—OWEN BROWNING, Ashley, Kingsomborne, Hants. s 87

EXTRACTED HONEY, 50s. cwt.; 1 lb. Jars, 9os. gross. Sections all sold out.—THE RAEBURN APIARIES, Sawbridgeworth, Herts. s 86

FOR SALE, strong Chapman HONEY PLANTS, 6d. per dozen.—Apply J. COMLEY, 246, Cricklade Road, Swindon. s 84

FINEST ENGLISH HONEY, 15s. per 28lb. tin; sample, 2d.—DUTTON, Terling, Essex. s 67

A FEW 1906 QUEENS, 3s. 3d. each.—R. MACKENDER, Seeds and Bees, Newark. s 64

WELLS HIVE, complete; swarm catcher, new skep and cap; lot £1.—PICKERSGILL, Bishop Monkton, Leeds. s 66

HEALTHY DRIVEN BEES, 1906 Queen, 4s. per lot; 4lb. lot, and 1906 Queen, 1s. 3d. per lb.; box returned.—E. GARNER, Broom, near Biggleswade, Beds. s 51

SYRUP FEEDERS, "The BEST," refilled without a bee escaping, 1s. 6d., twelve lbs., free.—HARRIS, Wavendon, Bucks. s 61

LIGHT EXTRACTED HONEY, in 28lb. tins, tins free, carriage paid, 7d. per lb., cash or deposit. Sample, 3d. Special quotations to large buyers.—BOCOCK, Ashley Apiaries, Newmarket. s 59

WANTED, a SUN DIAL, in exchange for bees.—Reply SUNDIAL, "Bee Journal" Office. s 49

CLOVER HONEY, GUARANTEED PURE.—1 lb. screw-cap bottles, 7/s. gross, 21s. ¼ gross; ½ lb. ditto, 45s. gross, 15s. ¼ gross; sample, carriage paid, 8d. Also honey in bulk. Further particulars on application. Orders executed in rotation.—TURNER BROS., Sandpit Poultry Farm, Croydon. s 75

HONEY, finest quality, 28lb. tins, 6d. lb. Sample 2d.—H. MAY, Kingston, Wallingford. s 42

STING PROOF GLOVES, 2s.; with sleeves, 2s. 6d., post free. Why pay more?—KENT, Manufacturer, Dorchester. s 26

DRIVEN BEES, with Queen, healthy, and safe arrival guaranteed, 1s. 3d. per lb. till Sept. 15, after that date 1s.; cash with order; boxes to be returned, or charged 3s.—CHARLES H. BOCOCK, Ashley Apiaries, Newmarket. s 46

HONEYCOMB DESIGN, Crown, 1906; splendidly worked out and ready for show bench; cheap.—C. COX, Honeycomb Design Maker, Brampton, Northampton. s 21

TESTED NATIVE QUEENS, July reared, post free, in automatic introducing cage, 2s. 6d. for cash. —CHARLES H. BOCOCK, Ashley Apiaries, Newmarket. s 45

HEALTHY DRIVEN BEES, with Queen, in 4lb. or more lots, at 1s. 3d. per lb.; boxes returnable, or will be charged for. Also Healthy Fertile Young QUEENS, at 1s. 6d. each, post free.—R. BROWN, Flora Apiary, Somersham, Hunts. s 47

HEALTHY DRIVEN BEES, with Queen, 5s. lot; fertile QUEEN BEES, 2s., per post 2s. 2d., packages free.—ROLLINS, Stourbridge. s 44

HEALTHY DRIVEN BEES, headed by 1906 Queens, f.o.r.; package free; 5s. lot.—BROWN, Expert, King Street, Wellington, Salop. s 48

DRIVEN BEES, a good supply, strong healthy lots, with 1906 Queens, 5s.; natural raised laying Queens 2s. 6d.—T. BRADFORD, Expert, 68, Droitwich Road, Worcester. s 13

GOOD HONEY, 28 lb. tins, 6d. lb.—GEORGE THOMPSON, "Beecroft," Helpringham, Lincolnshire. s 12

HEALTHY DRIVEN BEES, headed 1906, Queens 3s. 6d., 4s, 6d. per lot, f. o. r., receipt of order, package free, 15th season; less per quantity. Standard Frames of food, 4 to 6 lbs. weight, 1s. 6d. Medicated Honey and Sugar Candy, New Process, 4s 6d. per 14 lbs. Fine Light Honey 56s. per cwt., tins free, sample 3d.—W. H. BROWN, Expert, 1, High Street, Shrewsbury.

BEES of my hardy prolific strain, selected workers. 1906 tested Queens, 3s. 6d.; Bees, 1s. 6d. lb., for 5lb. lots or over. Packages to be returned. Guaranteed healthy. Safe arrival. — WHITING, Valley Apiaries, Hundon, Clare, Suffolk. R 94

Editorial, Notices, &c.

THE CONFECTIONERS AND ALLIED TRADES' EXHIBITION.

HONEY SHOW AT THE AGRICULTURAL HALL.

The Fourteenth Annual International Exhibition and Market of the Confectioners' and Allied Trades opened on September 8 at the above hall,, and remains open till the close of the present week.

There was a still further increase in the demand for space this year over that of 1905, and in consequence the honey competitions were again relegated to the annexe in the North Gallery. The change, however, gave those specially interested in the display of honey and bee-products a better opportunity for examining the exhibits than in the crowded avenues below.

The directors of these exhibitions have given such unmistakable evidence of their desire to foster and encourage the bee-industry of this country by affording an opportunity for bringing the good qualities of British honey, wax, etc. not only before the public of the metropolis, but before the tradesmen of the whole kingdom who assist the bee-keeper in the disposal of his produce, that we have been more than surprised at the facilities afforded to those concerned not being more fully appreciated.

With the object of drawing the attention of our readers to the subject, we inserted a short editorial, in our issue for August 23, once more inviting attention to the valuable money prizes and the merely nominal entrance fee. To these advantages was added the unusual privilege of being able to enter each exhibit for both shows connected with the Trades Exhibition—viz., the Confectioners' on the 8th, and the Grocers' on the 22nd. By this arrangement exhibitors could leave their honey in the hall to be staged (free of cost beyond the shilling entry fee) at the second show, with the prize winners at the previous one debarred from competing. All this was plainly put before our readers on page 331, and bearing in mind the fact that the great body of competitors are men who, while keen as they should be in striving for prizes, can ill-afford to throw away money in vain attempts to win at big shows, we were astonished to find them apparently oblivious to the favourable chances of success afforded at the exhibitions we are referring to. This was specially noticeable in the Honey Trophy Class, four exhibits only being staged — two by well-known men, one by a novice, who staged a trophy for the first time and the other by a bee-keeper who rarely exhibits. The money prizes were £4, £3, £2, and £1, respectively, and these four, for the outlay of one shilling each, for entry-fee, carried off £10 in prizes! It makes one wonder if bee-keepers are asleep, or attach no value to prize winning.

In the same way we were grievously disappointed with the class for sections. The prizes here were, we believe, higher than at any other show in the kingdom, yet only twelve exhibits were staged (for five prizes), the three best of which had to be disqualified for over-lacing. We refrain from giving the names of the delinquents (well-known exhibitors); but they deliberately threw away the valuable prizes offered through inexcusable carelessness.

Several of the other classes were also poorly represented, much to our regret, and the only class in which the judges had a stiff task before them was that for light-coloured extracted honey. Here over five hundred 1-lb. jars of excellent honey were staged, and we wished that the number of prizes could have been doubled, so good was the quality of the honey shown.

The limits of space prevent us from saying more now, but we hope to pay another visit to the hall before the week ends, and add a line of comment on the several classes in our next issue. In the meantime, we venture to hope that no prizes will be allowed to "go a-begging" at the coming Grocers' Exhibition, opening on the 22nd inst., and for which there is yet time to make an entry if sent in without delay.

Mr. W. Broughton Carr, London, and Mr. F. B. White, Redhill, Surrey, officiated as judges, and made the following

AWARDS.

Outfit for Beginner in Bee-Keeping.— (2 entries) 1st, Jas. Lee and Son, Highbury, London, N.

Display of Honey (comb and extracted) and Honey Products, shown in suitably attractive form for a tradesman's window (4 entries). 1st (£4 and B.B.K.A. Silver Medal), R. Brown, Somersham, Hunts; 2nd (£3), Jas. Lee and Son; 3rd (£2), O. R. Frankenstein, St. James' Terrace, Regent's Park; 4th (£1), Joseph Herrod, Sutton-on-Trent, Newark.

Twelve 1-lb. Sections (12 entries).—*Three exhibits disqualified for overlacing.*—1st (£1 15s. and Bronze Medal), Jas. Lee and Son; 2nd (£1 5s.).Joseph Herrod; 5th (5s.), Miss S. M. Baker, Donnington Road, Willesden. (3rd and 4th not awarded.)

Twelve 1-lb. Heather Sections (5 entries). —*One exhibit disqualified for overlacing.*— 1st, F. Collinson, Canonbury; 2nd, A. Macdonald, Glenurquhart, Inverness. (No 3rd awarded.)

Three Shallow Frames Comb Honey for Extracting (8 entries).—1st (£1), Jas. Lee and Son; 2nd (15s.), E.

C. R. White, Newton Toney, Salisbury; 3rd (10s.), T. Marshall, Ivy Cottage, Sutton-on Trent.

Twelve 1-lb. Jars Light-coloured Extracted Honey (44 entries).—1st (£1 15s.) and B.B.K.A. Certificate), J. Lee and Son; 2nd (£1 5s.), T. Marshall; 3rd (15s.), R. Brown; 4th (10s.), G. F. Brown, Corsham, Wilts; 5th (5s.), Jno. Berry, Llanrwst, N. Wales; v.h.c., R. Morgan, Cowbridge; W. Challis, Boro' Green, Newmarket, and S. G. Leigh, Broughton, Hants.; h.c., H. W. Saunders, Thetford, Norfolk, E. C. R. White, A. Dell, Leigh, Lancs., and C. Laywood, Market Rasen, Lincs.

Twelve 1-lb. Jars Medium-coloured Extracted Honey (27 entries).—1st (£1 5s.), Jas. Lee and Son; 2nd (£1), A. Young, East Street, Chatham; 3rd (15s.), J. Boyes, Queen's Head Hotel, Cardiff; 4th (10s.), R. Morgan; v.h.c.. C. J. Burnett, Hester Street, Northampton; h.c., J. Clay, Wellington, Salop, and Mrs. Harris, High Ferry, Sibsey, Boston, Lincs.

Twelve 1-lb. Jars Dark-coloured Extracted Honey (8 entries).—1st (£1), Jas. Lee and Son; 2nd (15s.), J. Waddell, Alwinton, Northumberland; 3rd (10s.), Miss G. A. Warley, Tadcaster, Yorks.

Twelve 1-lb. Jars Heather Honey (5 entries).—1st (£1), Jno. Berry; 2nd (15s.), F. Collison; 3rd (10s.), W. Cowans, Rothbury, Northumberland; 4th (5s.), J. Clay.

Twelve 1-lb Jars Heather Blend Honey (5 entries).—1st (20s.), A. G. Pugh, Beeston, Notts; 2nd (15s.), A. Brightwell, East Liss, Hants; 3rd (10s.), F. Collison; 4th (5s.), Jas. Lee and Son.

Twelve 1-lb. Jars Granulated Honey (12 entries).—1st (£1 5s.), J. Boyes; 2nd (£1), R. Brown; 3rd (15s.), R. D. Frusher, Crowland, Peterboro'; 4th (10s.), E. C. R. White; v.h.c., Jas. Lee and Son; h.c., J. Clay.

Beeswax in Cakes, Quality of Wax, Form of Cakes and Package, suitable for retail counter trade (9 entries).—1st (£1), G. Hunt, Hawton Road, Newark; 2nd (15s.), C. Dunn-Gardner, Fordham Abbey, Soham, Cambs.; 3rd (10s.), Jas. Lee and Son; 4th (5s.), R. D. Frusher; v.h.c., S. Wright, Urlmislow, Cheshire, and E. C. R. White; h.c., W. G. Hills, Comberton, Cambs.

Beeswax, judged for quality of wax only 16 entries).—1st (£1), R. D. Frusher; 2nd (15s.), Jas. Lee and Son; 3rd (10s.), E. C. R. White; 4th, Mrs. Harris; v.h.c., R. Brown.

REVIEW.

British Grasses.—There is no more happy and wholesome "sign of the times" than the rapid increase in this country of the taste for Nature study, and the new fancy takes the desirable form of home study. The rage is all for things British. This, at any rate, is the experience of the Country Press of Kensington, who have, we learn, been inundated with applications for their Nature Study (British) picture postcards, of which thirty, in five sixpenny packets, have so far been issued. British fern fronds, British tree leaves, British tree boles, and British trees in winter—all of these have already been brought before our readers. People are now asking for grasses, and the Country Press meet the demand by issuing twelve cards for 1s., depicting twenty-three interesting species, popularly and botanically named, showing magnified fructification and giving the time of flowering.

HONEY IMPORTS.

The value of honey imported into the United Kingdom during the month of August, 1906, was £2,106. From a return furnished to the BRITISH BEE JOURNAL by the Statistical Office, H.M. Customs.

Correspondence.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

**** In order to facilitate reference, Correspondents, when speaking of any letter or query previously inserted, will oblige by mentioning the number of the letter as well as the page on which it appears.*

NOTES BY THE WAY.

[6417.] The passing of the season should remind us that we must now begin to lay the foundation of our next season's work; the falling of the leaves tells us that the buds of another year's growth are just pushing them off, thus preparing continually for the great changes of the growth. Yet through all Nature's varying moods one has perforce to acknowledge 'tis always the same in the end; and so with our bee work and the life of the bee there is a continual change going on. But to the non-observant one there is but little change; the hives occupy the same positions they have done for years past, while every single life of the number of busy workers in the apiary is a new one. Yet how like their forbears, labouring with the same vim, and filled with the same jealous watchfulness of their home, the same readiness to give their lives in defence of home. And so it should be with us; we, too, must relax no effort in the care and attention needed in dealing with our willing workers.

The first necessity at present is a supply of water in districts such as my own,

where drought has prevailed for some six or seven weeks. Every pond and watercourse is dried up, and I find it as necessary to supply water to the bees as in the spring and early summer months. Our bees are very quiet just now; the long spell of heat and drought has parched everything up. There are no flowers for the bees to visit, in fact, I never remember the fields so bare as they are now; the aftermath of clover is everywhere dried up, not a flower for the poor humble bee except a Scotch thistle here and there in the old leys.

Wasps have this year been a great pest, and very troublesome at the hives. I have destroyed large numbers of them, but still they come.

Value of Swarms.—The value of an early June swarm to the purchaser depends on the locality in which the bees work during the season. Those swarms I referred to in a previous "Note" were sent ayont the Tweed, and if your correspondent "A. H.," (whose letter appears on page 346), will refer to a previous year's B.B.J.—I believe it was in 1899—he will see mentioned a swarm I sent to our friend, "D. M. M.," Banff; also that in the particular year alluded to they had a very good honey season in Banffshire, and before the season ended that June swarm gathered some 200 lbs. of honey. That was the largest quantity ever heard of as being gathered by a swarm of the same year. I have in the years since gone by received some glowing accounts of the good working qualities of English bees from Beedon, especially some swarms I sent many years ago to Dornoch, N.B., and also to the West of Scotland.

The principal work of the month is getting stocks into good condition for the coming winter, *i.e.*, with an abundance of food. Young queens and plenty of bees—the latter mainly young ones—are sure to do well, for most stocks with young queens will continue breeding this month. If hives are clogged with honey, part of the latter should be extracted from the back or side combs; then replace them in the centre of hive to be cleaned up. This will start breeding.—W. Woodley, Beedon, Newbury.

BEE NOTES FROM NORTH NOTTS.

[6418.] I am sending a few more notes in continuance of those which appeared in your journal on July 19 (page 283). The honey season here has been a good one on the whole, the yield being very fair in weight, and the quality good. Most of the surplus I secured was gathered during July, chiefly from clover. Some darker stuff was, however, obtained in June from the hawthorn, etc. The hives round about here of which I can get particulars have stored about 30 lb. to 40 lb. per hive; not bad for the neighbourhood. I have heard of fifty-seven sections and 48 lb. of extracted honey respectively being taken from two stocks. Our locality is not now a very good one for bees, owing to the extensive building operations of late years. No surplus at all has been stored since August 1 owing to the want of rain; in fact, the pastures have lost their usual green colour and become a beautiful brown (quite scorched up), the soil hereabouts being very light and sandy.

We have not had a good rain since June 28 and 29, i.e., during the Royal Show time; and I have no doubt our Junior Editor, Mr. Carr, well remembers those two days, as I do myself, after being examined by him in the downpour. In consequence of the lack of bee-forage caused by the drought, and the subsequent hot weather which has prevailed ever since, the bees have been very mischievous, and "robbing" has only been prevented with great difficulty.

The splendid weather this season has, however, been a good thing for getting young queens mated, and I have not heard of many failures. But it has been a bad one for cases of decamping swarms, many bee-keepers having lost both swarms and casts. One skeppist I called upon last week had lost three out of four swarms through the bees not clustering well. This same bee-keeper (although he had kept bees for forty years) had only seen a queen once during the whole time, and from what I could learn from him he said he does not really know now what one is like.

I find the brood-chambers of stocks are almost bare of stores this autumn, and they will require well feeding up in consequence; but, having had a good season, this does not trouble us much. I will now close, hoping that 1906 has been a good year for most bee-men, and that it will be repeated in 1907. I hope also other bee-keepers will let us know how they have fared this season. I should guess that it has been rather a good time at the moors. I only wish I was fortunate enough to be within easy reach of the "ling." I sign as before—North Notts, September 4.

COMMENCING BEE-KEEPING.

HINTS TO BEGINNERS.

[6419.] In accordance with the promise made in last week's B.B.J. (6415, page 355), I will attempt to give you my idea of the most economical method of beginning to keep bees.

The two methods usually advised are either to buy a swarm in spring or to procure driven bees and feed them up in the autumn. These are both excellent methods, but the plan I propose to describe is, to my mind, more economical and profitable than either.

In nearly every village there are several skeppists, and at this period of the year they usually sell, or "take up" (with sulphur) their surplus stocks. To a beginner I say: Go to a skeppist and buy a good stock which has swarmed this summer. It should weigh at least 30 lb. gross (if 35 lb. to 40 lb. all the better). Here a word as to foul brood. If the skep in question has sent out a good swarm (do not buy it unless it has) it will probably be healthy, but in any case blow in a puff or two of smoke, and then take a good sniff between the combs. If all right it will have the pleasant bee and honey odour; if diseased, the smell (somewhat like that of rotten eggs) is unmistakeable. In lifting the skep take care that the combs run parallel to your body if they have no sticks running through them, otherwise the combs may break off and fall at your feet. Such a skep should be bought by weight, and will probably cost 3d. per lb. and upwards just as it stands.

A piece of strainer-cloth may be tied over it at night when the bees are all in, and after the purchase is completed get home by the most convenient method of transit by road or rail. After setting up skep hive on its permanent stand see that the entrance is at least two inches wide; if not, cut it so with your penknife. A straw hackle (usually obtainable for a few pence from any bee-keeping labourer) should be placed over the skep to keep it warm and dry. Beyond glancing at the entrance occasionally to ensure its not being choked up with dead bees, the skep should be left severely alone for the winter. About the first or second week in May next, according to the weather at the time, the skep will be crowded with bees and brood, and some evening at dusk it should be quietly lifted up and a frame-hive fitted with comb-foundation placed under it. Care should be taken that this hive stands exactly level, or the combs are liable to be built out of the frames. The hive should have the telescopic lift, and the junction between or around the two hives should be well filled up with pieces of old cloth or of paper to keep the whole thing warm. When there is a good lot of brood in the frames below say, in about three weeks a sheet of excluder zinc must be placed on the frames under the skep, taking care that the queen is below. If she is still in the skep it must be driven, and the queen run in on to the frames. In another three weeks, or by June 14, which is usually the time when the chief honey-yielding plants, such as clover and sainfoin, begin to blossom, all the brood in the skeps will be hatched out, and the skep must be taken away and its contents extracted, the bees either being driven out or removed over-night with a super-clearer. If left on it will be filled up with honey, thereby causing double the messiness and trouble to extract. A rack of sections or of shallow-frames is then placed on the hive, and when half-full of honey other racks are given below, the first one according to the district, weather, and the honey-flow.

We have thus got rid of our skep, and our bees are comfortably settled on new combs in a modern hive.

It may be contended that I am advocating the use of straw skeps, but I am not—I do not like them. A third of the comb space in them is, as a rule, occupied by drone comb. But for wintering bees, a well-made skep, weighing 30 lb. to 40 lb., with a young queen, will safely go through the coldest winter or most backward spring without the fuss and bother of autumn or spring stimulation.

With reference to the usual methods of beginning bee-keeping. If you buy a swarm, costing (with carriage) anywhere up to £1, you certainly obtain nice, clean combs entirely free from foul brood, and, with a real good district, aided by a good season, you may perhaps secure the surplus mentioned by Mr. Woodley on page 282. On the other hand, if the summer is cold or dry, the swarm will barely provide itself with stores. It will have a queen one or more years old, and, unless re-queened, the stock will only cover about three or four combs the following April, and many suffer from spring dwindling. As to the other methods, if you can obtain driven bees for the driving, well and good; but to buy them at 3s. 6d. to 5s. per lot, and then mix two or more lots together on six or eight sheets of foundation, costing 4d. per sheet, besides feeding with 20 lb. to 50 lb. of good cane sugar, brings the cost of a colony made up like this to 15s. or more.

There are other possibilities connected with the above style of commencement for if you want an artificial swarm it is a simple matter to remove the skep to another stand after the bees are well started below, and the queen is in the bottom hive; you may then treat the latter like a swarm, placing on a rack of sections at once if a honey-flow is on.

All this may seem "ancient history" to many of your readers, but the method has always answered well with me when I have bought stocks in skeps, and I venture to say that it is more economical, as well as

more certain in its results, than the aforesaid two methods advised usually.

I could give my own results with skeps bought at various periods, but I have already trespassed too long on your valuable space, so I send name for reference, and sign—BEE-KEEPER, Cheltenham, September 8.

BEE NOTES FROM NORTH BUCKS.

[6420.] Referring to the question of uniting driven bees, I never think of uniting two lots if they are taken from combs with worker-brood in them, but I make it a rule to remove the combs from the skeps for the benefit of the skep owners; I then get an opportunity to see if the driven bees are healthy. They always do so well in my hands when dealt with in this way, that it has occurred to me to take out all combs from frame-hives at end of the season except the two or three with brood in them. I then extract the others and return them to the hive, after which I feed up just as I do driven bees.

I note the remarks of D.M.M. on "Combs, full sheets, or starters for swarms," in last week's "B.B.J." (6411, page 352), which recall an experience of my own in that line. A rather large stray swarm came to me on June 30, 1903, and was hived on six brood-combs and four shallow-frame combs in centre. On the following day I removed the shallow-frames and put them in a super along with four others. I then substituted four brood-frames fitted with full sheets of foundation for the shallows taken away, and within twenty-four hours the bees had put honey in nearly every cell of the brood-frames. The super with eight shallow-combs was then put on top of the brood-frames, and quite filled by St. Swithin's day. But as there was brood in the shallow-frames I had to wait till mid-August for brood to hatch out before taking off, the weight of surplus being about 30lbs. The swarm was estimated at 10 or 12lbs. It does not seem possible for them to have done so well on even full sheets, let alone starters. I "took up" a skep on September 7 (a swarm of May 24) which weighed between 50 and 60lbs. I afterwards put the bees into a frame-hive for the owner. In closing I add a line about the honey yield in North Bucks. My own average was about 60lbs. per hive, but I have made my best lots into nuclei. Some made in June cover at date of writing seven, eight, and nine frames respectively, whilst others have been again divided and are now doing well.—A. H., Wavendon, Bucks., September 8.

VILLAGE BEE CLUBS.

BEES AT BARNWELL.

[6421.] Kindly allow me to thank Mr. Meade (6407, p. 345) for his very interesting account of the "Dunchurch Bee Club," and the attempts to check foul brood. I wish there were a few more bee clubs about. They would help the bee industry immensely.

We have had a fairly good honey season in North Northants, but the price of honey is very disappointing; many are selling at 6d. per pound.

I have a stock of bees that are exceedingly bad-tempered. I lifted a rack of shallow frames off last week, and about half the bees swarmed out of the hive and literally covered my clothes with stings. It happens that this stock is extraordinarily industrious or I should re-queen it. I am very pleased to see that there are still some bee-keepers who do not introduce foreign queens because they are prettily marked. I am sure our good old English bees are far superior. If new blood is wanted in an an apiary, why not buy an English queen from some other district?

I can show some comb-honey gathered by English bees that I am quite certain no foreigner can beat. Is not that letter of your correspondent, "M. P. T." (3392, page 347), amusing? It appears to me that some people think they can obtain a fortune from bees without any experience or trouble; but I find that a lot of attention must be paid to the working of hives before bees can be made to pay. If you think this random letter is not fit for print there is always the "W.P.B." handy. I enclose name, and sign — AVONDALE, Northants, September 1.

NOTES FROM MID-LOTHIAN.

RAIN! RAIN! ! RAIN! ! !

[6422.] According to the old Scottish legend, if it rains on July 15 we will have rain more or less for six weeks, and this year we have had the legend fulfilled to a day. Some little surplus has been gathered from the clover, and with the extra warmth we expect some from the heather, but the rain has spoilt our prospects of a good year. As an exception, however, to the general poor results, I may say we had an English swarm this season that built out and filled eight frames from 1½ in. starters of foundation in six days, and are now working in a rack of 2-lb. sections, which is half full at date of writing. I introduced a virgin queen, one of the so-called "eight-mile strain," being anxious to get some long-distance flyers, but it got lost in the mating. This is the third queen I have had from that advertiser. These bees are, to my mind,

a rash speculation; they seem to be caged too long, and don't get the same attention from birth that a natural queen does. So when this last one failed I inserted a frame of eggs from another hive, and they reared from these eggs a queen that got safely mated. But this queen in every way resembled a drone, except for the legs, which were very long and extra hairy. The bees allowed this drone-like queen to lay a patch of eggs perhaps four inches square, and then set about building two queen-cells, and when the cells were well forward they destroyed the queen. I let them go on with their cells, and eventually both hatched out, and on examining the frames I found the smallest virgin I ever saw; in fact, it was smaller than a worker bee.

In conclusion, I may say all our swarms are hived on starters, and the bees have to be taken about six miles to the heather. This is our twenty-fifth season, and we have only missed two seasons during that period, and only one comb broke down, no wires, and often combs are not built to the bottom of the frames. When built from starters you sometimes get undesirable drone-comb, but I confess I do like to see a certain amount of drone-comb, as it provides store room for the winter. Every spring it should be moved to the outside. A hive on starters will outweigh one on full sheets every time. I send name for reference.—MAC, Mid-Lothian, Sept. 8.

DEALING WITH FOUL BROOD.

[6423.] I should like to offer a suggestion for dealing with foul brood, probably known to and practised by some of your readers, which might possibly be of some use. This district is a terrible place for foul brood, and I am inclined to think it spreads largely through people keeping bees in frame-hives, letting them die out, and not troubling to move the hives, just as much as by the much-abused straw skep, which latter will, at least, rot in a reasonable time if not removed. My own bees have practically been twice "wiped out" in the last twelve years, but I am now trying another plan, by using hives holding fifteen frames. In the spring I build out the full number (fifteen), and on supering reduce to twelve or ten if there is no brood in the combs to be removed. In the autumn, again, I reduce to ten, taking out five of the oldest combs (to melt down for wax), and return the five new ones built out in the spring. In this way the combs are renewed automatically every two years, and by adopting this plan I hope to keep the pest in check.

It seems plain to me that the fifteen-frame hive had several advantages, for with a good queen-excluding dummy, and also a plain dummy, one can place a poor comb behind the Q.E.D., and in three weeks remove it free of brood. One can also manipulate the frames without having to keep at least one outside the hive, and I find in a hive of fifteen frames reduced to ten or twelve on supering that the bees soon go aloft.

I also used to be much troubled with wax-moth, but by using frames ("Hoffman") with no saw-cut right through the top-bar my hives are free from this pest at present. On the other hand, I hope the standard-frame will not be altered. If the hive used is not large enough, have another frame or two; but I can remember when my father "scrapped" all his "Woodbury" hives and frames, because you cannot work two sizes of frame with any comfort or economy. Probably British engineering practice would not have advanced to where it now stands but for that great engineer, Whitworth, who standardised the screw-thread, while our English engineers are sticking to it; therefore, I say, let us stick to our standard frame, unless some very much more forcible argument can be given for an alteration than has been adduced up to the present. I wonder if you, or any of your readers, happen to remember seeing a patent hive made by a man named King? My father had one, and I have kept it on till now. It is not a movable-frame hive, but a box about 18 in. long, 10 in. wide, 15 in. deep, and has a row of drawers on top as a super. The back is nearly all glass, with an outer case and a door at the back. It makes the best kind of observatory hive I know of, and one's friends can watch bees working as long as they like; moreover, the bees do very well in them. I had 85 lb. of comb honey a few years ago from one, but the last few seasons have not been very good. The present year is very fair with me, and I am well satisfied. If you would like a photo of the hive referred to, and some particulars, later on, I will send them, as some of your readers might like to make one in the winter.

I hope you will forgive this "yarn," but I find writing is as bad as *talking* about bees; once you begin, you can't stop.—RICHARD BAYLY, Plymouth.

[Send on photo by all means.—EDS.]

BEE PARALYSIS.

[6424.] Some years ago I had a bad attack of this in my apiary. About fifteen stocks were affected, and from strong colonies the bees went down in numbers to less than weak ones. In fact, with the exception of one hive, they were reduced to one and two frames of bees—and sparsely

covered they were at that. I attributed the trouble at the time to the hives being overheated when taken to the heather, for, not having far to take them, I was rather careless as to ventilation. When the disease broke out and during the whole of the time it continued, I noticed that all the sealed honey was wet and sweating. As the bees decreased in numbers I took the uncovered combs away and melted them down for wax. The honey in them had a sour smell and taste, but the smell was especially noticeable. Indeed, so long as there was any of the old honey left in the hives the trouble kept on; but as soon as it was cleared out the disease disappeared, and I have never seen any trace of it in my hives since. All the stocks managed to recover their strength again by the end of the season. I wonder if any of your readers have noticed the "sweaty" or damp appearance of combs when the disease was present? Name, &c., enclosed for reference.—NONDESCRIPT, Notts, September 3.

TWO QUEENS IN A HIVE.

[6425.] Having seen several queries and remarks in B.B.J. lately about finding two queens in a hive, I thought it might interest your readers to know that twice during the last month, while doing expert work in Essex, I have seen two queens in one hive, the first time at the apiary of Miss Potter, Enfield, on August 16. In this hive there was an old queen in the centre of hive and a virgin on the outside comb. The other case was more remarkable, and occurred at the apiary of Mr. Brooks, at Ashingdon Chase, on August 28. Both queens were on the same comb and the same side when seen, one an old, worn-out queen and the other a young, fertile one. Judging by the amount of brood and eggs, these two must have been together in the hive for some time, as the old queen was too feeble and decrepit to have been able to account for it.

Bees in this county are still breeding freely, and many stocks have not yet killed off all the drones.—JAMES HERROD, Trentside Apiary, Sutton-on-Trent.

A DISTRICT B.K.A. FOR KENT.

[6426.] As a result of the success attending the five lectures on bee-keeping at Crayford by Mr. Garratt, on behalf of the Kent County Council, a number of interested persons met at the parish room on August 9 for the purpose of forming a bee-keepers' association. Mr. H. Lane, Bexley Heath, being elected chairman *pro tem.* It was unanimously resolved that an association be formed under the title of the Crayford and District Bee-keepers' Association. After full discussion, the following officers were appointed: President, Mr. E. R. Stoneham, Crayford; Vice-Presidents: Mr. J. Roper, Slade Green; and Mr. H. Lane, Bexley Heath; Secretary and Treasurer: Mr. J. M. Bates, Slade Green School, Erith. An Executive Committee of six was also appointed, with power to add to that number. The subscription (for the present) was fixed at 1s. per member. It was also decided to become affiliated to the British Bee-keepers' Association.

It is hoped that the Association will grow and become a power for developing the bee industry in Kent.

The next meeting will be on Thursday, October 11, at Crayford Parish Room, 7.30 p.m., when Mr. Roper will give an address on "Foul Brood."—J. M. BATES, Sec. and Treas., Slade Green School, Erith.

Queries and Replies.

[3400.] *Swarming Vagaries.*—1. I found enclosed bee on alighting board of a hive; will you kindly tell me if she is a queen or worker? if the former, is she an old worn-out one, and do you think the bees have requeened themselves? She was lying quite alone. 2. About six weeks ago I found quite a large number of bees lying dead or dying in the road about 50 yards from the hives, with shed, trees, and hedge intervening; what do you think may have caused this? 3. On July 5 a weak colony (which had only just pulled through the winter on six or seven frames, and which I had fed up in spring with several pounds of candy and given three frames of brood from other hives) swarmed; I was not at home; they were, however, safely skepped in readiness for a friend who was coming for them; the next morning they swarmed again out from skep, and after being caught, came out once more, were skepped, and all being well, were left until 6 o'clock in the evening, when on going to the skep, it was found that every bee had disappeared. A fortnight afterwards (July 19) a small swarm of bees was observed on the other side of fence by the gardener. Thinking at first it was my truant swarm, I hived it, and an hour after put it into the parent hive. (They were not seen on the wing by anybody.) Please tell me if you think it was the original swarm returned, or a cast? 4. I have some syrup left over from that with which I fed the above weak colony last autumn; kindly say if this can be used this autumn for feeding purposes? Awaiting reply in your valuable paper, from which I have received many hints, I enclose card and sign C., Bucks.

REPLY—1. Bee sent is not a queen, but a worker. It looks longer than usual, and so has deceived you, but the longer abdomen is owing to abdominal distension or from overgorging. The bee lived some time after receipt, but was constantly disgorging honey

or syrup till it died. 2. It is difficult to say without personal inspection. 3. It is quite probable that the swarm found on the fence was a portion of the original swarm with the queen, and had been in the hedge all the time. 4. Yes.

[3401.] *Re-Queening Stocks.*—I purchased a skep of bees in the spring, and by June 28 they had transferred themselves to a frame-hive. The queen, proving a good one, filled 13 frames with brood and the stock was then supered with shallow-frames. In August, not knowing the age of queen, I thought best to re-queen the stock, but owing to the good qualities of the old mother-bee I wished to preserve her, and therefore gave her to a nucleus colony. (I omitted to mention that when I took the queen away I found a queen-cell capped as if for a late swarm, and all frames filled with brood and stores.) Since being placed in the nucleus the old queen has been laying well, but the bees have again raised a queen-cell as if to replace her. Should you consider it a case of an almost worn-out queen, and the result a queenless stock later on? I am greatly interested in the "B.B.J.," to which, together with the "Guide-Book," I am indebted for my knowledge of bees. I am also interested in the pictures of bee-keepers' apiaries. Do you not think it would be interesting to some of we younger readers to be brought into contact with the older and larger apiarians by means of their portraits in "B.B.J." Perhaps I am only asking for what has been done (I am only a three-years-old reader). It gives one more interest in a man's writings when one can picture him in his apiary after seeing the writer personally or by photo. It was brought more forcibly to my mind when reading of the death of Mr. J. M. Hooker, whom, until then, I had always regarded as an American bee-keeper. —J. DAWSON, Wolverhampton.

REPLY.—We cannot always account for the vagaries of bees at times with regard to deposing their queens. When once they start queen-cell building it seems impossible to stop them. In your case we should have done much the same as yourself, and advise you to retain the old queen till she fails in prolificness and then replace her. 2. The subject has already been fully dealt with in our pages. A few years ago there appeared portraits of all the leading bee-keepers of the day. Now that our "Homes of the Honey-bee" appear at regular intervals the portraits of the bee-keepers who own the apiaries, illustrated generally, are shown, so that the need of special portraits are in a measure done away with. Personally, we do not care to see the portraits of bee-men constantly appearing in print. It is a little overdone, we think, in some of our contemporaries.

[3402.] *Transferring Bees and Re-Queening.*—I began beekeeping this year by purchasing a swarm, which was delivered and hived in a W.B.C. hive, in the first week in June last. It took the bees until July 6 to draw out and cover the seven frames I hived them on, at which date I put on the excluder zinc, and gave a rack of sections. Before doing so, however, I examined the brood-chamber, which seemed in a very flourishing condition, and full of both brood and honey. The bees did not enter the sections for some time, but they have now become very numerous, and fill every one, and they have fully built-out all the full sheets of foundation almost to their utmost extent. So far, however, there does not appear to be any honey at all in the combs; in fact, there seems to be very little honey to be gathered in the locality except, perhaps, from a large field of camomile growing about 500 yards away. About a week after putting on the rack of sections, I was wondering why the bees did not take to them, and on examining for the cause I discovered that the zinc was put on with the slots parallel with the frames instead of at right angles, as recommended in the "Guide Book." I tried to move the zinc, but found it fastened to the tops of the frames too firmly to make it possible without causing a great disturbance. Can you tell me (1) how to move the zinc? (2) Whether, in view of the time of year, and absence of honey, I should remove the worked-out sections and put the remaining three full frames of foundation in the brood-chamber, and feed up the stock with a rapid feeder? Or should I allow the rack to stay on at present, and feed up later without adding more frames to the brood chamber? (3) Should I re-queen the stock, and, if so, when and how? The swarm, I have reason to believe, is from a hive which swarmed last year, so the queen starts her third year in 1907. (4) I have a large quantity of cotton yarn (as per enclosed sample): would this not make good winter padding round the sides of the hive? I am now a regular reader of both the JOURNAL and the RECORD, and having kept the brood-chamber so small you will quite understand that I am bitterly disappointed at gathering no honey at all this year.—A. R., Wallington, Surrey.

REPLY.—1. The section-rack must first be removed (without disturbing the quilts), and set on a board, so that the bees will not get out; then smoke the bees down, and keep them down, while the excluder zinc is prized up at one corner, and pulled off. This done, cover the frame tops with a quilt, so that no bees can escape, and take the section-rack some distance away. Remove the top covering, and let as many of the bees as will take wing go back home. 2. We should not give the bees any additional frames of foundation to work out this year. Winter them on the seven frames of comb they now occupy. 3. We should not re-queen unless you are certain that the queen is old and worn-out. 4. The material will make good winter packing for the frame tops, but no winter packing is needed with a W.B.C. hive.

[3403.] *Value of Text Books in Helping Beginners.*—As a bee-keeper of only about three months' standing, I am seeking further information, and so I ask: 1. With reference to the wintering of bees, the 'Guide Book' says: "Extract all unsealed stores." I suppose this does not refer to when there are only about half a dozen cells unsealed? At the end of May I had a small swarm—not 3 lbs. in weight when it came to hand—which I fed for about seven days, and then had to

leave the bees to look after themselves, as I was going away on my holidays. On my return I find that the bees have drawn-out ten frames of brood comb, which are now partially filled with honey and brood. 2. Would you advise me to take out a couple of frames for wintering, leaving those with the most honey? 3. If so, how would you suggest taking the honey from the frames removed, as it would be hardly worth while putting two frames with only a small portion of honey into the extractor? I have only one hive at present, wishing to "go slowly." As a rule, I find all information I require in the "Guide Book," and thanks to that and the help of the B.B.J. (which I have now taken for nearly twelve months) my experience of bee-keeping has so far been intensely interesting. —Thanking you in anticipation, W. J. B., Leicester, September 10.

REPLY.—1. If the "Guide Book" is read carefully, and its instructions followed closely you will rarely go wrong. At the same time its readers are supposed to use their intelligence on such a point as that referred to. There is no mention of extracting all unsealed stores in the chapter on "Wintering" (page 161), but the danger of wintering bees on unsealed food is distinctly mentioned as being conducive to dysentery. This being so, it should be readily understood that the mention of extracting "all sealed stores" in the final chapter of the "Guide Book" was not intended to be taken literally, as if "half a dozen cells" of unsealed stores would affect the bees one way or the other. 2. If eight of the frames contain 30 lbs. of sealed stores there is no need for more, and the two remaining frames may be removed, but some bee-keepers prefer leaving in the whole ten frames for winter. This is merely a matter of slight divergence in the views of able bee-masters. 3. If the unsealed honey is so small in quantity as not to be worth using the extractor for, we should certainly not trouble about extracting it at all. Thanks for your appreciation of "Guide Book," and also of the B.B.J.

Bee Shows to Come.

September 12 and 13, at Edinburgh.—Thirteenth Annual Exhibition of Midlothian B.K.A. in Waverley Market. Open classes for six sections heather, six sections flower, six jars heather, six jars flower. Prizes, 15s., 10s., 5s. Entry, 2s. per class. Schedules from W. Weir, Heriot, Midlothian.

September 8 to 15, at the Agricultural Hall, London.—Honey Show in connection with the Confectioners', Bakers', and Allied Traders Annual Exhibition and Market. (See outside cover advertisement. **Open to all British Bee-keepers.** Entry fee in each class one shilling. Schedules from H. S. Rogers, Secretary, Exhibition Offices, Palmerston House, Old Broad Street, London, E.C.

September 13, at Castle Douglas.—Honey Section, Dairy Show. Liberal prizes. Five open classes.—**Entries closed.**

September 20, 21, and 22, at Crystal Palace.—Surrey B.K.A. Annual Exhibition of Bees, Honey, Wax, and Appliances, etc. Twenty-six classes (ten open to all). Increased prizes and medals. Schedules from F. B. White, secretary, Marden House, Redhill, Surrey. **Entries close September 7.**

September 22 to 29, at the Agricultural Hall, London.—Honey Show in connection with the Twelfth Annual Exhibition and Market of the Grocery and Kindred Trades. Nearly £50 in prizes for honey and beeswax including four prizes of £4, £3, £2, and £1, in honey trophy class. **Open to all British Bee-keepers.** Schedules from H. S. Rogers, Secretary, Exhibition Offices, Palmerston House, Old Broad Street, London E.C.

September 26, at Altrincham.—Show of Honey Products, in connection with Altrincham Agricultural Show. Open to United Kingdom: Classes for Hives, Observatory Hive, 12 Jars Extracted Honey. Open to County of Chester only: Classes for Trophy, Amateur-built Hive, Two Shallow Bars, 12 Jars Run, 12 Sections, Wax, etc. Special classes for cottagers. Special classes for Society's district. Liberal prizes. Low entrance fees. Schedules from Mr. J. H. Hall, 2, Dunham Road, Altrincham. **Entries close September 9.**

October 9 to 12, at the Agricultural Hall, London.—Show of Honey and Bee Produce in connection with the British Dairy Farmers' Association. Numerous and liberal prizes for honey, etc., including the valuable Silver Challenge Cup of the B.B.K.A. Schedules from Mr. Wm. C. Young, Secretary, 12, Hanover Square, London, W. **Entries closed.**

October 18 to 21, at Waverley Market, Edinburgh. — Honey show in connection with the Tenth Annual Edinburgh and Midlothian Industrial Exhibition. All open classes. Beautifully illustrated prospectus, price 2d., from A. Hutchinson, 15, Leith Street, Edinburgh **Entries close September 27.** (See advt. p. v.)

November 9 and 10, at Chorley, Lancs. —Honey Show of Lancs. B.K.A. in connection with Chorley Chrysanthemum Society's Annual Show. Four Open Classes. Exhibitors allowed to bring honey for sale. Schedules from W. G. Smith, Town Hall Auction Rooms, Chorley, Lancs. **Entries close November 3.**

Notices to Correspondents & Inquirers.

W. H. S. (Notts.).—Exhibiting Bees in Tradesmen's Windows.—There can be no valid objection to enterprising tradesmen seeking to attract buyers on the way you mention, but when it comes to their selling such stuff as the sample sent as "choicest strained honey" we should fancy that buyers would themselves protest and ask for the return of their money. Our opinion of the "Choicest" etc., is that it is some wretched foreign stuff entirely unfit for table use. With regard to its "being a punishable offence," as you say, the remedy is in the hands of any one who buys it by informing the authorities connected with the pure food Acts.

NOVICE (Cheltenham). Queen Cast Out Dead. — The queen-bee sent, though small in size, bears the appearance of being old and worn-out. As the stock is weak it is useless for re-queening, but the bees, if healthy, may be united to the adjoining colony.

C. S. S. (Weymouth).—Wax Moth in Hives. —1. Without having any personal knowledge of "Keating's powder," as a means of destroying wax moth, we feel pretty safe in saying that it will not have the desired effect. 2. When combs are infested with the moth larvæ it is advisable to burn combs and frames at once. 3. The bees will have entered other hives. 4. The queen found on floorboard would probably be worthless.

*** *Some Queries and Replies, &c., are unavoidably held over till next week.*

Special Prepaid Advertisements

Twelve words and under Sixpence: for every additional Three words or under, One Penny.

FINE 1906 TESTED QUEENS, naturally reared, post free, in introducing cage, 2s. 6d.; pure imported Italians, 5s. 6d.; pure imported Carniolians, 6s. 6d.—PIDDUCK, Sunnyside Apiary, Alsager, Cheshire. T 3

FOR Sale, six SHEEP DOG PUPS, on rail, 10s. each. Particulars, 1d. stamp.—RIDLEY, The Apiary, Horney Common, Uckfield, Sussex T 14

DRIVEN BEES, good supply, strong, healthy lots, headed with laying 1906 Queen, 5s. lot, 1s. 3d. per lb. weight; also laying 1906 Queens, 2s.—T. BRADFORD, Certificated Expert, Droitwich Road, Worcester. T 15

"BRITISH BEE JOURNALS" for sale, 10 years and 5 volumes, well bound, 1886 to 1895. Will take cash or honey.—ROBERT CAMPBELL, McLean Place, Dumbarton. T 7

100 GOOD SECTIONS for disposal, 7s. per dozen. —E. LOARING, Thrapston, Northants. s 99

WANTED.—"Beekeeper's Guide Book," 12th and 16th editions, in good condition, in exchange for new copies of latest edition.—Write to MANAGER, B.B.J. Office, 8, Henrietta Street, Covent Garden, London, W.C.

ROOT'S "A.B.C. OF BEE CULTURE" (1903), perfectly new copies, 3s. 6d., post free.—MANAGER, B.B.J. Office, 8, Henrietta Street, Covent Garden, London, W.C.

DRIVEN BEES, 4s. 6d.; 1906 Queens, 1s. 9d.; wax wanted.—HANNAM, Highgate Road, Birmingham. T 1

HEALTHY DRIVEN BEES, 1s. 2d. lb., boxes 6d., returnable; grand young Heather Queens (fertile), in introducing cages, 2s. 6d.—HOOD, Marine Café, Whitby (late of Pickering). T 2

DRIVEN BEES, with Queen, healthy and safe, arrival guaranteed, 1s. per lb., cash with order; boxes to be returned or charged 3s.—CHARLES H. BOCOCK, Ashley Apiaries, Newmarket. T 5

TESTED NATIVE QUEENS, July reared, post free, in automatic introducing cage, 2s. 6d. for cash, order early, supply nearly exhausted.—CHARLES H. BOCOCK, Ashley Apiaries, Newmarket. T 4

WILL exchange new frame hive for strong stock in skep.—R. MAUDE, Dipton, Co. Durham. T 6

30 STONE FINE QUALITY HONEY, 56s. cwt., tins free, carriage forward, free sample.—JACKSON, Duxford, Cambs. T 8

PURE BLACK MINORCA COCKERELS, hatched early April, fine birds; sell or exchange stocks or driven bees.—RICHARDS, Thurlby, Wallington, Surrey. T 16

NEW LIGHT CLOVER HONEY, 400 lbs., at 6½d.—BEECH, Saltersford, Barnton, Northwich. T 9

NEW THIS SEASON; owner going abroad; four "W.B.C." hives, with bees, £1 1s. each; two "W.B.C." inner chambers, with bees, on eight frames, two stocks on six frames; about 100 Standard Drone and brood combs, once in extractor, at 5½d each; shallow combs, "T.H.H." self distancing, at 5d., all combs wired; shallow frame crates; queen excluder sheets, at 4d.; Little Wonder extractor, 3s.; no reasonable offer for lot, or separately, refused. List for stamp.—"OWNER," care of this journal. T 10

CROCUS BULBS (yellow), Arabi Alpinus slips, 100 1s. 3d., free.—BRAYSHAW, Aultmore, Keith. T11

THE NEW FOUNTAIN FEEDER, made from syrup tins, cheapest and best; bees cannot escape in refilling; try one; easily made. Send 7 stamps and lid of syrup tin; three for 1s. 6d.—Invented by H. HAWKINS, Beekeeper, Burgheath, Epsom. T 12

FOR Sale, nine good STOCKS of BEES, good hives, all standard frames, a quantity of shallow frames, lot £12; selling through owner leaving.—G. HUNT, Wycombe Marsh High Wycombe. T 13

FOR SALE, fine Extracted and Comb HONEY, in bulk. — T. PULLEN, Ramsbury, Hungerford. s 98

GOOD, STRONG, HEALTHY STOCKS of BEES, in Frame Hives, 20s. to 30s. Extracted Honey, 56s. cwt.; 1-lb. jars, 7d.—H. WILSON, Livermere, Bury St. Edmunds. s 76

BROOD COMBS, suit driven Bees, healthy, 7d. each. Honey Tins, 30-lb. capacity, lever lids, extra strong, 8s. dozen. Light Honey Screw-cap Jars, 8s. 6d. dozen; gross, £5; 30-lb. Tin, 14s. 6d.; cwt., 52s. 6d.; sample 3d.—CHARTER, Tattingstone, Ipswich. s 78

STOCKS OF BEES FOR SALE, singly or otherwise; moving.—WARD, Ludborough, Louth. s 81

WANTED, to exchange good rook rifle for Honey or Bee appliances, value 30s.—Particulars from E. STOREY, Hertford, Herts. s 85

PERFECT COMBS, from Foundation and Driven Bees, by using "Nondescript" device. Cannot stretch. Better than wiring. 20 years' proof in large apiary. Sample, 7 stamps. Full set for one frame, 13 stamps.—PALMER, Hayton, Retford, Notts. s 89

EXPERIENCED EXPERT seeks SITUATION as All-round or Handy Man. Fair amateur joiner and hive maker.—W. PALMER, Hayton, Retford, Notts. s 88

2.000 LBS. LIGHT ENGLISH HONEY, £3 and £2 16s. per cwt. Quotations bulk. Sample, 3d.—ALBERT COE, Apiary Hall, Ridgewell, Halstead, Essex. s 97

STOCKS IN SKEPS, 1906 Queen, plenty natural stores, 12s. 6d., 13s. 6d. Stocks on four frames, brood and stores, 10s. 6d.; 1906 Queen. Orders booked for driven bees, 5s., with Queen. Despatch in few days.—W. WOODS, Normandy, Guildford. s 95

QUEENS, choice fertile 1906, bred from my non-swarming stock, 3s. each. Immediate despatch. —TAYLOR, Hollyhurst, Boldmere Road, Wylde Green, near Birmingham. s 94

HONEY, fine quality, 56s. per cwt.; two cwt. and above at 53s. Sample, 3d.—OWEN BROWNING, Ashley, Kingsomborne, Hants. s 87

FOR SALE, strong Chapman HONEY PLANTS, 6d. per dozen.—Apply J. COMLEY, 246, Cricklade Road, Swindon. s 84

FINEST ENGLISH HONEY, 15s. per 28lb. tin; sample, 2d.—DUTTON, Terling, Essex. s 67

HEALTHY DRIVEN BEES, 1906 Queen, 4s. per lot; 4lb. lot, and 1906 Queen, 1s. 3d. per lb.; box returned.—E. GARNER, Broom, near Biggleswade, Beds. s 51

SYRUP FEEDERS, "The BEST," refilled without a bee escaping, 1s. 6d., twelve 16s., free.—HARRIS, Wavendon, Bucks. s 61

LIGHT EXTRACTED HONEY, in 28lb. tins, tins free, carriage paid, 7d. per lb., cash or deposit. Sample, 3d. Special quotations to large buyers.—BOCOCK, Ashley Apiaries, Newmarket. s 59

WANTED, a SUN DIAL, in exchange for bees.—Reply SUNDIAL, "Bee Journal" Office. s 49

HONEY, finest quality, 28lb. tins, 6d. lb. Sample 2d.—H. MAY, Kingston, Wallingford. s 42

Editorial, Notices, &c.

THE CONFECTIONERS' EXHIBITION.

(*Continued from page* 362.)

A second and more leisurely visit to the Agricultural Hall on the 14th inst. served if possible to emphasise the feeling of regret with which the honey department of the show impressed us. To begin with, we may mention the new departure made by the exhibition authorities in offering prizes for bee-appliances. This class was added to the schedule mainly because of the frequent complaints made by visitors to the bee section—whose interest had been aroused by what they saw—that no hives or bee-appliances were on view, and it was expected that manufacturers, specially those located near London, would have deemed it worth while to exhibit in this class in order to meet the requirements of the case at a very small cost to themselves. The result was two exhibits (staged by the same firm), one full and complete, and the other smaller in cost, and suited to a beginner of limited means. As only one prize can be given to the same exhibitor in any class, the second and third prizes were not awarded, but the failure to secure any adequate entry in the class under notice is difficult to understand.

The trophy class and that for twelve 1-lb. sections were dealt with last week as being in the highest degree disappointing, although in the former class the few exhibits shown were of the highest quality and admirably staged. Concerning the rest, some excellent honey was staged in the class for three shallow frames of comb honey, all the awards going to very good samples indeed. The light-coloured extracted honey class, with its forty-four dozen 1-lb. jars on view, was a sight to see, and it would have been a very satisfactory task for the judges could they have awarded a prize to all exhibits worthy of the same. Class 006, for medium-coloured honey (twenty-seven entries) was also good, the honey being of far better quality on the whole than is usual in that class. Dark-coloured honey, though only represented by eight dozen jars, was a fairly good class for quality, the prizes going to very good samples. Extracted heather honey, however, was as badly supported a class as that for heather sections only five entries being staged for the four prizes offered. The quality, however, was very good, especially in the winning jars.

Class 009, another new class introduced for the first time, was also a disappointment so far as regards the number of entries, five entries only being staged for four prizes.

With a class taking in so many otherwise not very good flavoured honies, and, moreover, having the quality immensely improved by a dash of heather, we expected to see a full entry and keen competition. As it was, there was almost no competition at all—nothing more than selecting the best lots in the order of merit. We hope that our readers will wake up next year to the possibilities of this class. Class 010, for granulated honey (twelve entries) was a very good class, the winning samples being splendid, and those which just missed a prize almost equally worthy. The remaining classes for beeswax—i.e., 011, for cakes suitable for counter trade (nine entries), and 012, for three 1-lb. cakes, judged for quality of wax only (sixteen entries)—were very good indeed, the exhibits being of excellent quality, and making a capital display.

We hope the number of entries will be satisfactory next year, and more in proportion to the value of the prizes offered. The selling classes have been so badly supported that we have little doubt they will be withdrawn.

Correspondence.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

**** In order to facilitate reference, Correspondents, when speaking of any letter or query previously inserted, will oblige by mentioning the number of the letter as well as the page on which it appears.*

AMONG THE BEES.

IRASCIBILITY.

[5427.] The season of the year, the nature of the flow, the amount of interference they are subjected to, as well as climatic conditions, all go to explain the uncertain temper of bees at times. Race also counts considerably, and the blending of certain races almost invariably produces "cross" bees, for although we must very frequently indeed seek the prime cause for ill-temper in the actions and conduct of their owners, yet I am confident that the introduction of certain new strains with the object of securing the energy and vitality which some preachers tell us are lacking in our natives has produced an amount of temper in my own bees I have hitherto been a stranger to.

The following incident is, I think, worth recording. I was lying reading one day lately under the shade of some young trees when a number of bees came buzzing about my head and face. Formerly, in some-

what similar circumstances, I simply ignored their presence, but their attentions on this occasion became so marked that I decided to execute some of them with the object of getting rid of the interruption, and also to decide the nature of their markings. About half a dozen were laid low when I got aural and ocular demonstration that I was becoming the centre of attraction for quite a large number of bees, and, not only so, their attentions became so marked that I had to rise and quit my lair. I tried to walk off with as much dignity as possible away from the hives, but I had to mend my pace until at last it assumed a species of run. The whole procedure was so unwonted, and so unfamiliar to me for many years, that I did not fully grasp its importance until I had got more stings in a few seconds than I generally get for months—all about the back of the head and neck. My theory is that the odour of the mutilated bees attracted the attention and raised the ire of their confrères to such a high pitch that all within reach became temporarily demoralised. Perhaps, too, the rapid motions of my hands in killing the bees was a cause of offence. In any case, I learned a useful little lesson.

Heather men know that bees generally are more cross-tempered during the late flow, specially on very hot days near its close. They sting, too, at that time with a degree of force and venom unknown at other periods of the year. Their whole being seems to be so impregnated with the eager desire for indefatigable and uninterrupted work, that any check or hindrance is at once markedly resented. Here, too, their line of flight is not in one particular direction in front of their hives, and so straight for the foraging fields as is the case at other times of the year. They seem to go out and come in from all directions, so that the whole surroundings are a perfect maze of flying bees. Therefore, in walking behind the hives or doing any manipulations, the bee-keeper is still in the line of flight. I consider it a wise discretion, for this reason, to keep away from close proximity of the hives throughout the day as much as possible, and carry out any operations late or early. This tends to keep bees in a sweeter temper, and perhaps helps to preserve one's own. Under the influence of the sudden injection of venom from two or three stings, even ministers have been known to ——. I'll not say what!

With the atmosphere heavily charged with electric currents, bees are frequently of a very uncertain temper, and it is best in such circumstances to leave them alone. In dull, misty weather, when it rains fine a Scotch mist—they are generally cross. The enforced idleness, the want of the expected supply of nectar, and the crowded state of the brood-chamber, when the congested atmosphere is over-charged with unwonted gases, puts the eager workers, crowding in each other's way, into ill temper. Should, however, the sun shine all is hurry and bustle, and they ply their incessant labour in peace with each other and all the world. Man is largely a creature of moods and tenses, regulated to a considerable extent by the nature of the weather. Can we wonder, then, that bees, whose success or failure so entirely depends on good or bad weather, should be governed by this benign or baneful influence, which counts so extensively in the short span of their brief life.

Every bee-keeper is in duty bound to keep his bees in as good a temper as possible, both for his own comfort and good name, as well as for the credit of the craft in general.

When I remember that I am the possessor of rather over one million insects with stings, it makes me anxious to do everything possible to keep them in a happy frame of mind, and a sweet, gentle temper. In taking off sections, whatever method is followed, it is important to handle honey only, not bees. Therefore, clear all racks and crates before withdrawing them from the hives. Use smoke plentifully at the critical moment, but not in over-profusion. If you employ carbolic cloths, avoid oversaturating them, as in this condition they not only leave an unpleasant odour on the honey receptacles, but even on the honey, while there is a danger of demoralising the bees, or even rousing instead of controlling them when the cloths are overcharged. Do nothing to set the bees a-robbing, as at this time a boom set up is most difficult to allay. Late afternoon or early morning is the best time to deprive bees of their surplus at this season of the year, as this gives time for all commotion to subside quietly when work is over.

My new "All Goldens" gave me a hurry-up the other day. I understood they were gentle as lambs, stuck to their combs, and never flew at their owner as our maligned blacks are said to do. I was sadly undeceived. Trusting to their good nature, I began by using very little smoke. Opening the hive in a free and easy way, there followed five minutes of the liveliest experience I have ever had among the bees.—D. M. M., Banff.

THE CONFECTIONERS' EXHIBITION.

[6428.] I have read your editorial of last week (page 361) dealing with the above, and beg to send a line or two on the subject by way of reply. Personally I am not sur-

prised at bee-keepers being reluctant to enter their honey at these large shows. Take my own case. Last year I made an entry in the class for light-coloured extracted honey at the Grocers' Exhibition, in London. I find the total cost of carriage, etc., to and from the show was 16s. 9d., rather a big amount for the honour of staging one dozen jars of honey. Now add to above the cost of a railway journey of 300 miles, with loss of day's work and something for the inner man, and you will agree, no doubt, that it was a pretty expensive exhibit. But this is not all. I made that journey for the educational gain which I felt sure must follow; but imagine my surprise upon arrival at the hall on the Monday, to find a barrier keeping the public six or eight feet away from the chief exhibits (with a uniformed attendant in charge), and to find that the prize cards had not been affixed to the exhibits, even as late as 2.30 p.m., though the awards were made on the Saturday previous.

If this is considered grumbling without a cause, please forgive me, but I have felt sore about it ever since, and if other exhibitors of last year were in anything like my position the disappointment complained of in your remarks is partly accounted for.

Further, I consider the standard testing-glasses for light honey serves but one useful purpose, that is, to prevent complete disqualification of "class" entry. To my mind, one might as well show a jar of treacle as stage honey in the "light class, which only just comes inside the colour test, as this seldom or never takes a prize, therefore it appears a foolish and unnecessary expense to do so.

If the honey—to win—must (besides possessing the necessary good points) be so very light in colour, what chance has any exhibitor showing in the same class with honey of a darker colour, although classified correctly?

His only chance is to enter the next season's honey in the "Not for Competition" class. But, what a position! Beautiful honey, too dark for the light class, yet not dark enough for the medium class! With every good wish to our Editors, allow me to send name, etc., and sign as before—WORKER, Notts, September 17.

[We were sorry to receive the above singularly unfortunate account of "Worker's" experience of last year's show, but our correspondent cannot justly blame anyone but himself for what we regard as the most serious item on which his complaint is grounded—viz., cost of carriage. If this is explained we will go into the other matter and endeavour to afford a satisfactory explanation in next week's issue.—EDS.]

A BEE-MAN'S COMMENTS.

[6429.] I would like to offer a few remarks on some of the articles in B.B.J. of September 6. First, with regard to "D. M. M.'s" article on page 352 dealing with full sheets or starters of foundation for swarms. I have use "starters" only for a 4-lb. swarm. The bees were hived on six frames, and as a result I got two-thirds of the frames built out with drone-comb. True, that was in the days of my novitiate, and I should probably manage it better now; but it gave me such a dread of excessive drone populations that I have never used starters since, for that stock seemed to be full of drones next season. The best result I ever had from a swarm was about two or three seasons later, when I hived an 8-lb. swarm—the largest I ever had—on four drawn-out combs and five full sheets of foundation, and placed on the stand of old stock. I took 73 lb. of surplus honey from them that same season, but next spring the stock was so weak in bees that I united them to another colony. I had given them in their first season a rack of sections when hived and a second one a week afterwards, and only fourteen days later took the two off completed with forty-two of the best sections I ever obtained. The date of hiving was June 7, the flow from sainfoin commencing on the same day.

Referring to Mr. Tom Sleight's remarks (6414, page 345) respecting his bees having filled-out brood-nests with stores from heather, I may say that I have never seen bees better provisioned in brood-chambers than they are this year in this neighbourhood, though we have not any heather. My experience of the late honey-flow is quite the same as that of "Amateur's" (6415, page 355). The flow is generally over by the third week in July, but this year my bees were gathering quite till the middle of August, which is fortunate, or they would not have been able to gather much surplus, for it was well on in June before they made a start. My hives which did not swarm averaged about 40 lb. each, which is very fair for our district.

Some bees in this neighbourhood have done very badly, although healthy. I have noticed also with "Amateur" the prevalence of *Braula cæca* this season on driven bees. They are not generally very prevalent about here.

I hope few bee-keepers have been so plagued with wasps as myself this year. They have cost me many shillings in damaged sections notwithstanding the fact of my having destroyed all nests I have been able to locate with boiling water. Yet still they come. On going to drive some bees at a neighbouring village two miles distant last week I found two skeps completely cleaned out by wasps.

The quality of my honey this year is very good, free from honey-dew, which is not often the case. Apologising for taking so much space, I sign myself — MID-OXON, September 7.

BEE-KEEPERS' ASSOCIATION.

DISTRICT B.K.A. FOR CROYDON.

[6430.] I have been requested by a few prominent bee-keepers in Croydon to try and make it known that there is a great desire to start an association here, to be called "The Croydon and District Bee-keepers' Association," in order that we can if possible run an annual show and get more people to take an interest in apiculture. I have received letters from a number of persons who are desirous of becoming members through a notice being put in a local paper, and we have thought that we could get in touch with more bee-keepers if it was made known through your columns. We do not get any bee-lectures or bee-tent here unless some one is generous enough to pay for it out of their own pockets, which is not very often. True, there is an association for Surrey (probably the best in existence), but owing to some slight clause in the Surrey County Council grant it appears that they cannot do Croydon the justice they would like to. We therefore feel that we are to a certain extent left in the cold. I am not a member of the Surrey Association and in consequence I am not acquainted with the full particulars; but I do not think that the proposed association need be in any way antagonistic to the Surrey Association. On the contrary, it could be made a branch of it, and bee-keeping would be more localised. I have about thirty bee-keepers anxious to commence, and only two of them are members of the Surrey B.K.A., so that we feel confident of success, if we can once get the start. I will be glad, therefore, if any person desirous of joining will communicate with me, and may say we shall shortly be calling a meeting for the purpose of arranging matters.—A. WAKERELL, Sec. pro tem., 21, Mansfield Road, Croydon.

BEES AND COLOUR IN FLOWERS.

HAVE THEY ANY PREFERENCE?

[6431.] I thank you very much for your kind letter, in reply to mine, asking for information or observations likely to build up Lord Avebury's conclusion, viz., "That bees show a decided preference for blue flowers." The experiments are described as follows by Lord Avebury:—

"In order then to test the power of bees to appreciate colour I placed some honey on a slip of glass, and put the glass on coloured paper. For instance, I put some honey in this manner on a piece of blue paper, and when a bee had made several journeys, and thus become accustomed to the blue colour, I placed some more honey in the same manner on orange paper about a foot away. Then, during one of the absences of the bee, I transposed the two colours, leaving the honey itself in the same place as before. The bee returned as usual to the place where she had been accustomed to find the honey: but though it was still there, she did not alight, but paused for a moment, and then dashed straight away to the blue paper. No one who saw my bee at that moment could have had the slightest doubt of her power of distinguishing blue from orange. Again, having accustomed a bee to come to honey on blue paper, I ranged in a row other supplies of honey on glass slips placed over paper of other colours, yellow, orange, red, green, black, and white. Then I continually transposed the coloured paper, leaving the honey on the same spots; but the bee always flew to the blue paper, wherever it might be."

I have received several replies from able experts expressing the view that bees may have visited the blue paper laden with honey in preference to other colours in Lord Avebury's experiments. I have found but few experts who have made experiments with different coloured *flowers* so as to enable them to give an absolute decision. All the experiments are fully described in "Ants, Bees, and Wasps." "On the Senses, Instincts, and Intelligence of Animals," by the Right Hon. Sir John Lubbock, Bart., F.R.S., M.P., F.L.S., D.C.L., LL.D. Also in his reply to Prof. Plateau in "The Linnean Societies Journal," Botany, Vol. 33, "On the Attractions of Flowers for Insects," read November 4, 1897.

These experiments are so very conclusive and coincide with the deductions I am able to make from the study of the technical press, that there is no alternative but to rely on the facts elucidated by such careful, painstaking, and exact experiments.

G. W. Bulman, Esq., M.A., B.Sc., has recorded several Tables of Observations in the *Zoologist*, June, 1902. Also in a paper on "Insects and Flowers," read at the Eastbourne Natural History Society, December 19, 1902, giving numerous observations and facts which should be accepted as a definite decision, he concluded his paper by saying "these facts prove conclusively that whatever the bee's taste may be, it does *not* specially *select blue flowers for its visits.*"

The second problem raised in this discussion, viz., "Can Insects Reason?" has elicited a number of affirmative replies accompanied by many illustrations and anecdotes from observers who are able to

("*Correspondence*" *continued on page* 376.)

HOMES OF THE HONEY BEE.

THE APIARIES OF OUR READERS.

We have numbered a good many bee-keepers who are gardeners among those whose bee-gardens have been pictured in our "Homes of the Honey-bee," but our friend, Mr. Peed, is, we believe, the first nurseryman whose apiary has been illustrated, and we gladly welcome as a reader one who follows a line of business believed by some to be injured more or less by bees entering their greenhouses and doing damage therein by their visits to blooms for the purpose of pollen-gathering, etc. His own experience as a bee-keeper is interesting, and needs no addition from us. He says:—

MR. THOMAS PEED'S APIARY, WEST NORWOOD, LONDON.

"Being a regular reader of your valuable journal, and seeing from time to time the excellent photos of your friends all over the country, I thought possibly my brief bee experience would help to encourage others.

"I commenced bee-keeping by purchasing a skep of bees from a gardener, and having another gardener friend who is an expert, I asked him to recommend a frame-hive for me to buy. This he readily did, and I soon procured one. Then came the great sensation, when my friend arrived to drive the bees from the skep to their new home. After "driving," I thought it a wonderful sight when he threw the bees from the skep on to the board laid in front of the prepared frame hive, and the manner in which the little creatures all faced right about, and marched like drilled soldiers into the 'new house' was a sight once seen, never forgotten.

"My next move was to buy a number of second-hand hives, which had once formed part of a fine apiary, and these I thoroughly cleaned and painted ready for future use. At last a friend presented me with two swarms, but when I went for them, I found one lot had decamped, and it being rather late in the season, I had to feed the remaining stock considerably, but they eventually proved the most profitable lot in the apiary.

"Our district is not considered a good one for honey, although one bee-keeper here took sixty 1-lb. sections from one hive, and sold them all at 1s. each, this summer, and that within two miles of my apiary, at the ancient village of Dulwich.

"It was during the summer of 1901 that I had my first experience of hiving swarms. One very hot morning I went out to look at the bees, and was surprised to see thousands of them streaming forth from one of the hives. After a little time I saw that the swarm was clustering on an elm tree in a corner of the garden, very high up, and, with the help of some onlookers, we raised a ladder, which had to be placed on the public footpath.

In a short time the place was as lively with people as with bees. However, I donned a bee-veil, and up I went, with saw in hand, to sever the branch and bring down the swarm. The branch being too strong and heavy, I shook it over an empty skep, and eventually brought down a very fine swarm, which was successfully hived. Hearing shortly afterwards that a vagrant swarm had settled on a tree near at hand, I went to investigate, and found, to my great satisfaction, a very fine swarm, which I secured without much trouble.

"I next bought a bee-house or shed holding five or six skeps of bees, but the bees had located themselves in colonies all over the inside of the shed, in some cases the sheets of comb were hanging from the roof 18 in. deep and 2 ft. wide, and mostly full of honey, too. I got about 1 cwt. of honey, besides the stocks of bees. The price I paid for the house and bees I must not tell you, or it might make some friend jealous. I fear I have made my notes too long, so will conclude by wishing you long and continued success with your instructive and interesting journal."

("*Correspondence*" *continued from page* 374.)

prove that ants and bees are attracted by colour. This problem should not be indexed as insoluble.

Should there be any further notes or observations—either editorial, or from any of your readers versed in the subject—to make on these matters that will be conclusive evidence (or illustrations, slides, etc., to loan), I shall esteem it a great favour if you will kindly let me know, and I shall be pleased to reciprocate at any time if in my power to do so.—J. T. RODDA, Grove Road, Eastbourne, August 22.

KEATING'S POWDER FOR WAX-MOTHS.

[6432.] If the basis of "Keating's Powder" is pyrethrum, your correspondent, "C. S. S., Weymouth" (page 39), would be well advised not to use it in his hives. In my early bee-keeping days I was pricking out some pyrethrum from a seed-bed into a border and went straight to one of my hives for some manipulation. The bees simply astonished me by making as straight for me as they could, until I remembered that pyrethrum is the chief ingredient in some insect powders. Washing my hands with carbolic soap, I presented myself again to the bees, and was received just as if nothing had happened. I once found out in a similarly unexpected manner that saltpetre used in brown paper to make it smoulder infuriated the bees. Was it Shakespeare who called it "villainous saltpetre"? — S. JORDAN, Bristol, September 14.

ITALIAN BEES.

ARE THEY DESIRABLE FOR BEGINNERS?

[6433.] I think a word of warning should be given to beginners before they attempt to Italianise their colonies. My past experience proves that these bees remain pure for a very brief time only; in fact, it is nearly impossible to get young queens mated with Italian drones. The result is, the pure Italian virgin mates with a black drone, and this cross in nearly all my cases gave a strain of extremely bad-tempered workers. If beginners in handling them get badly stung they are apt to give up bee-keeping in disgust, which is a pity, for I consider it one of the most interesting of hobbies. The temper of these bees does not seem to improve very much by a second cross.

I generally use a carbolic cloth when examining my hives, and these hybrid Italians only run down while the cloth covers them, to immediately reappear directly one attempts to remove the frames, many taking wing and not infrequently attacking the operator wholesale.

I had a stock of black bees in the country which I could do almost anything with, by just using a cigarette; but I should be very sorry to examine any of my Italian stocks now without a veil.

I have now about seventeen stocks of these Italian hybrids, but I think next year I shall rear from a black queen and gradually replace these undesirables, as I do not consider that their virtues by any means counterbalance this vice. I admit that they gather later than the blacks, and I also think them more prolific.

I wonder whether any other bee-keeper could give a similar experience or otherwise.—W. F. H., Croydon.

[We rather think the carbolic cloth is in a great measure the cause of bees acting as stated above, and have many times seen the same result follow the use of a too strongly carbolised cloth on a stock of brown or native bees.—EDS.]

BEES IN A NEWSPAPER OFFICE.

[6434.] For the past fortnight an observatory hive has been exhibited in the office window of the *Surrey Daily Argus*, at 121, High Street, Croydon.

The hive consisted of two frames with sections at the top, and the bees had access to the open by means of a tube.

The bees were watched by a crowd of onlookers from early morn till late at night.

The *Surrey Daily Argus* published daily an article on "Bees and Bee-keeping," specially written for that journal.

This combination of such an extended object-lesson in the window, with a well-written article appearing daily in the columns of this local paper, has set Croydon talking about bees, and led to a desire to form a bee-keepers' club or association for Croydon, which it is understood is now in process of formation. Mr. A. Wakerell, 21, Mansfield Road, South Croydon, is acting as secretary pro tem.—J. S., Croydon, September 15

SELLING DRIVEN BEES.

[6435.] Please stop both my advertisements for the sale of driven bees. Thanks to your esteemed paper, I am inundated with orders, which I am executing as quickly as possible. I have worked at high pressure from daylight till dusk. I should be obliged if you could insert this as a word of explanation to my customers, as it is quite impossible for me to write an explanation to every one. I should like to assure them that their orders will be despatched in due course. Thanking you in advance—W. H. B., Wellington, Salop, September 15.

Queries and Replies.

[3404.] *Swarms Building Queen-cells in "Wells'" Hive.*—May I ask you to answer me the following question through your valuable B.B.J.? In July I hived a large swarm in a frame hive. They have done exceptionally well, but I have been unable to account for two queen cells found on a comb I was examining last month. I don't know whether there are any other queen-cells on combs, not having examined. The bees were placed on frames, some fitted with full sheets and others with half or quarter-sheets of foundation. I have been bee-keeper for a number of years, but have never known of a similar case previously. I don't think they have thrown off a swarm nor re-queened, and so I ask:—1. What do you think of the case? 2. I had a very strong swarm from a "Wells" hive, each compartment of the hive being on twelve frames in brood-box, and eight standard frames in supers. About three weeks later, in examining the hive I found the bees had left the compartment which had swarmed, and joined with its neighbours, both lots being busy removing stores from one to the other. This also puzzles me.

Another case I wish to state is that one of my swarms, placed on ten full sheets of foundation, gnawed away the wood from under top-bars of several frames (unwired), causing the foundation to drop down during the next day. Removing this, I found that the combs seen in these empty frames were built-out sooner than when full sheets were put in. I state this because lately I have noticed that differences of opinion exist with regard to the value of foundation.

Could you give me name and address of a skep-maker, as I wish to have some special skep-supers made? Awaiting your reply, I sign myself, "Bienenfreind," Padiham, Lancs.

REPLY.—1. We should say it is simply a case of the bees re-queening themselves, that is if the cells seen are more than partly-formed ones. 2. It is quite common for the bees of both compartments of a "Wells" hive to join forces when one lot becomes queenless, as they not seldom do in these hives. 3. It seems to us physically impossible for bees to "gnaw away wood," as stated, and so cause foundation to drop down in a few hours, as alleged. Consequently, there must be some other way of accounting for the fall of foundation. Any appliance dealer would give you the name, etc., of a skep-maker if you send stamped postcard for reply.

[3405.] *A Beginner's Queries.*—Will you please say:—1. What are the reasons for putting salt and vinegar in sugar-syrup? I suppose the former, however, is to prevent the sugar re-crystalising. 2. What is the difference between wasps and hornets, and how are they distinguished? We are greatly troubled here with wasps this season. 3. In July I caught a Dragon-fly snapping up live worker bees (bees on the wing). As I do not remember seeing anything about them in B.B.J., will you please say whether they are a recognised enemy of bees, and do they do much bee-catching? 4. Is much of the comb-foundation made nowadays of pure bees-wax? There seems to be a lot of stuff now made from adulterated material. Can you say what firms make good bees-wax foundation, as I suppose pure foundation is better for the bees? Is the American "Weed" made of bees-wax? Seeing so many bee-keepers retail their wax, I do not see how foundation manufacturers can get good bees-wax without they buy foreign stuff; that is, supposing they use bees-wax to make foundations from. Judged by the price we pay for comb-foundation, we ought, I think, to get good stuff made from pure wax.—I send name, and sign, "Commerce," Derby.

REPLY.—1. We do not know that salt is absolutely necessary in syrup-making, but the known fondness for saline liquid is, no doubt, taken into account in making the syrup palatable to the bees. 2. The main difference lies in the fact of the hornet being more than double the size and weight of an ordinary wasp. 3. The dragon-fly is not included among the enemies of bees. 4. Yes, the best makers of foundation always use unadulterated beeswax in its manufacture.

[3406.] *Utilising Pollen-Choked Combs.*—In July I discovered one of my hives was queenless. I took out several combs which were completely filled with pollen, replacing them with foundation and a comb of brood. I write to ask: (1) If I might use these pollen-

filled combs for driven bees? (2) Or would it be best to place them in a super, with queen-excluder zinc between, and let the driven bees take down what honey there is in them to draw out foundation below, and then boil them down for wax? Reply will oblige.—W. J., Salisbury.

REPLY.—(1) Pollen-choked combs are useless to the bees and unfit for boiling-down for wax; not worth the mess and trouble involved. (2) The bees would use up any unsealed honey while being fed liberally for comb-production, but we should put the comb through the extractor for preference if there is any quantity of it.

[3407.] *Swarming and Queen-Cells.*—To a swarm hived early in July I introduced a young queen on August 1, having removed the old one twenty-six hours earlier. On August 19 a 4lb. swarm came off, and on examining the hive afterwards I found the queen and one ripe queen-cell, and a few vacant ones. I therefore ask:—1. Was the queen accompanying this swarm the one I introduced? 2. If not, must we assume that she was badly received, and that queen-cells were commenced immediately on discovery of the loss of old queen, or were queen-cells commenced before I removed old queen? I enclose sample of section foundation taken from a rack which has been a failure, and ask: 3. What is the cause of the holes? I paid top price for the foundation, and it comes from a well-known dealer.—A. P. W., Newton-le-Willows, Lancs.

REPLY.—1. We should say yes. 2. There does not seem to be any reason for this assumption. 3. The foundation has a stale look, and is, we think, not of this year's make; otherwise we do not see anything wrong with it. If bees had been strong and needed room for honey-storing they should have worked the foundation out and used it for surplus, provided, of course, that honey was to be had, and the section-rack was warmly wrapped to make it warm and snug for the bees' use.

[3408.] *A Lady Amateur's Bee Troubles.*—I have lately started two frame-hives, and should like to know the best course to pursue with regard to them. I hived a large natural swarm on June 20 in a skep, and on the 30th transferred them, by the process described on page 26 of the "Guide Book," successfully into a W.B.C. hive holding ten frames. On July 22 I moved three of these frames (all of which had been fitted with full sheets of foundation) and found two of them already worked out by the bees. I then put on a rack of shallow-frames with queen-excluder zinc between. A fortnight afterwards not a bee had gone up into the super, so I removed the zinc and they have since gone up, and worked-out four or five of the frames and deposited therein some very thin dark honey, which latter being unfit for use, I removed the whole super. I may also add that I removed it once before the above occasion, and have done the same once since, and each time the bees have appeared very excited, clustering at the entrance and circling about in the air above the hive as if they intended to swarm, for some hours. My desire is to transfer the seven frames and all bees to another W.B.C. hive, as the one they now occupy is unpainted; not only so, but bees have also got into the side of the hive owing to one of the frames not being pushed up to the side. I also wish to remove the present queen and give them a young fertile one of this year, besides returning the three frames I took out to crowd the bees up into the super on July 22. Kindly tell me:—1. Is this right or not? 2. Why is the honey so dark in super? 3. Why are the bees so excitable some days? With regard to hive No. 2, the case is as follows:—A fortnight ago I purchased a stock in a frame-hive made by an amateur. The hive is completely crammed with honey and bees, weighs about 50lb., and on the top of frames is a box in which the bees have built combs and deposited pollen in the lower part of same; the top part of the same combs being filled with the finest straw-coloured honey. I must keep the bees in their present hive for the winter, as it contains all their winter stores, and the frames cannot be transferred, being badly built and not of the right size. These bees also have several times become greatly excited for a few hours as the others did. Kindly give me your opinion about this hive also, and state possible cause of excitement. I shall also be glad to know name and address of the secretary of the Northants B.K.A.

The disadvantage to many of keeping bees is the difficulty in selling the honey. I know two bee-keepers near here, one of whom has given up as he could not sell his honey at any price. The other, who keeps twenty hives, has the most beautiful clover sections, and finds the greatest difficulty in getting 6d. per pound for them, and out of this has to pack and deliver the honey; whereas all the shops never charge less than one shilling each for prime sections.—F. C. B., Northants.

REPLY.—The plan followed is not based on the instructions given on p. 26 of "Guide-book." The directions there given are for hiving a swarm, not for transferring at all. Consequently the method adopted was not suitable. 2. The dark colour of honey is due to the source from whence the bees gathered the honey. 3. The "Guide-book" contains full information on this point. Regarding hive No. 2, the upper box should be removed and the contents appropriated for use, the bees being allowed to return to their hive. Mr. R. Hefford, Kingsthorpe, near Northampton, is secretary of the Northants B.K.A., and will no doubt be able to tell you how members are able to sell their bee produce. But much depends on the bee-keeper himself in the matter of marketing honey to advantage. Some can get rid of their surplus readily, while others utterly fail because of their lack of business methods.

[3409.] *Wide-Spaced Frames for Surplus.*—May I ask, if, in your view, are not the shallow-frames in the supers too closely placed? I ask this, since an outside frame from one of my supers has the most perfect comb I have ever seen. The space between this frame

and the wall of the hive was double the space between the other frames, but the bees built out cells on the outer side of this frame of a much greater depth and regularity than they did in the half-space they had between the other frames. One sweep with the knife uncapped the whole side. Has there ever been a discussion in the JOURNAL or RECORD *re* the distance between the honey frames? If so, I should much wish to read it.—I send name, and sign—J. B. C., Loughborough.

REPLY.—It is a matter entirely of preference and for the bee-keeper himself to say whether he will space his shallow-combs at same distance apart as those in brood-chambers, or have thicker and heavier combs for extracting. We think it is generally known to the craft, and all dealers stock the wide W.B.C. ends, made specially and used for heavy combs. Not a few prefer the ordinary spacing for surplus-chambers, because of their experiencing some difficulty in extracting heavy combs without breaking. With regard to width of frames in brood-chambers, spacing, etc., there have been numerous lengthy discussions on the subject fully reported in past issues of the B.B.J. We could send on copies of some containing the articles in question, if required.

PRESS CUTTINGS.

BEES IN A RAILWAY STATION.

A hive of bees caused a wild commotion at Burgess Hill Railway Station, in Sussex, a little while ago.

A large parcel addressed to a local resident was tumbled out on to the platform by a railway employee. The parcel, which contained a hive, gave way, and out streamed the bees, causing the porter to run for his life. The stationmaster ordered, threatened, offered rewards, but none of the porters was daring enough to remove the parcel. Finally, an outside porter, an elderly man, was induced to lift the parcel by the offer of a shilling, but when the bees buzzed round his head he dropped the package and fled.

All day the bees held the staff at bay, but at eight o'clock at night they returned to the hive, which was then hurriedly closed up and carried to its destination.—*Daily Mail.*

Echoes from the Hive.

Flora Apiary, Somersham, August 18.—Bees are in splendid trim, working early and late on buckwheat and red clover. Some driven bees I put on seven frames of foundation a fortnight ago have five frames sealed over and two with young brood.—R. BROWN.

Bee Shows to Come.

A nominal charge of 2s. 6d. is made for notices (not exceeding 7 lines) in this column, 10 lines charged 3s. 6d.; up to 15 lines 5s., which covers cost of insertion from order till date of show. Cash should accompany orders for insertion.

September 20, 21, and 22, at Crystal Palace.—Surrey B.K.A. Annual Exhibition of Bees, Honey, Wax, and Appliances, etc. Twenty-six classes (ten open to all). Increased prizes and medals. Schedules from F. B. White, secretary, Marden House, Redhill, Surrey. **Entries close September 7.**

September 22 to 29, at the Agricultural Hall, London.—Honey Show in connection with the Twelfth Annual Exhibition and Market of the Grocery and Kindred Trades. Nearly £50 in prizes for honey and beeswax including four prizes of £4, £3, £2, and £1, in honey trophy class. **Open to all British Bee-keepers.** Schedules from H. S. Rogers, Secretary, Exhibition Offices, Palmerston House, Old Broad Street, London E.C.

September 26, at Altrincham.—Show of Honey Products, in connection with Altrincham Agricultural Show. **Entries closed.**

October 9 to 12, at the Agricultural Hall, London.—Show of Honey and Bee Produce in connection with the British Dairy Farmers' Association. Numerous and liberal prizes for honey, etc., including the valuable Silver Challenge Cup of the B.B.K.A. **Entries closed.**

October 18 to 21, at Waverley Market, Edinburgh. — Honey show in connection with the Tenth Annual Edinburgh and Midlothian Industrial Exhibition. All open classes. Beautifully illustrated prospectus, price 2d., from A. Hutchinson, 15, Leith Street, Edinburgh **Entries close September 27.** (See advt. p. v.)

October 18 and 19, at Kilmarnock, N.B. —Honey Show in connection with the annual exhibition of the Ayrshire Agricultural Society. Schedules on application to John Howie, Secretary, 53, Alloway Street, Ayr. **Entries close October 5.** (See advt. p. v.)

November 9 and 10, at Chorley, Lancs. —Honey Show of Lancs. B.K.A. in connection with Chorley Chrysanthemum Society's Annual Show. Four Open Classes. Exhibitors allowed to bring honey for sale. Schedules from W. G. Smith, Town Hall Auction Rooms, Chorley, Lancs. **Entries close November 3.**

Notices to Correspondents & Inquirers.

Letters or queries asking for addresses of manufacturers or correspondents, or where appliances can be purchased, or replies giving such information, can only be inserted as advertisements. The space devoted to letters, queries, and replies is meant for the general good of bee-keepers, and not for advertisements. We wish our correspondents to bear in mind that, as it is necessary for us to go to press in advance of the date of issue, queries cannot always be replied to in the issue immediately following the receipt of their communications.

GEO. MOIR (Cumberland).—Forage for Heather Honey.—1. The sprig of heath sent is the true ling, *Calluna vulgaris* (see B.B.J. of September 6, page 359). 2. Regarding consistency of honey, the air-

bubble must obviously travel upwards more slowly in a jar of honey when reversed, when the honey is of good consistency, seeing that honey is thinner when unripe.

Honey Samples.

S. MITCHELL (Herefordshire). — Sample is of "medium" colour, having a strong aromatic odour from some source not familiar to us. It is of good flavour, and a nice honey for table use.

D. W. J. (Harrogate).—Buying Second-hand Hives.—We have heard of the hive which bears the name mentioned, and know something regarding its supposed merits, but have had no practical experience of it, nor can we give any helpful information about it.

GRIP (Aberdeenshire).—Re-liquefying Granulated Honey in Comb.—Cut up the combs and place in a dish, then put the latter in a pan of hot water, and keep hot till comb and honey are thoroughly liquefied. Then remove cosh, and, when all is cold, lift off the wax in a solid cake.

W. A. B. H. (Co. Durham.—Leaf-Cutter Bees.—Full particulars regarding the Megachile, or leaf-cutter bee, appeared in our monthly, the B.K. RECORD, for this month.

J. G. (Kent).—Keeping Jars of Honey in the Sunshine.—It will not injure the flavour of honey to keep jars containing it in the sun, and it certainly helps to ripen, or improve its consistency, if so kept for some days.

****** Some Queries and Replies, &c., are unavoidably held over till next week.***

Special Prepaid Advertisements

Twelve words and under Sixpence: for every additional Three words or under, One Penny.

GUARANTEED HEALTHY DRIVEN BEES, 5s. per stock, with 1906 Queen; bees with four standard frames, stores, brood and queen, 10s.; Queens, 1906, 2s. 6d.; stocks in skeps, 12s. 6d. and 13s. 6d.; Stores good.—W. WOODS, Normandy, Guildford. T 18

COWAN EXTRACTOR, by Meadows, splendid machine, all parts plated, only used once, 40s. —AVERY, Deverell, Warminster. T 23

BROOD COMBS, suit driven bees, 8d. each; light honey screw cap jars, 8s. 6d. dozen, £5 gross; 30 lb. tin, 15s.; cwt., 53s. Sample 2d.—CHARTER, Tattingstone, Ipswich.

WANTED, HEATHER SECTIONS. State price, delivered free, good condition.—FISON, Rawdon, Leeds. T 37

FINE YOUNG PROLIFIC QUEENS (1906), 2s. 6d. each to clear.—WAKERELL, Mansfield Road, Croydon. T 20

ONE CWT. VERY FINE ENGLISH EXTRACTED HONEY, mainly from clover, £3. Sample sent. —S. S. CLEAR, Shepreth, Cambs. T 26

FOR SALE, PURE ENGLISH HONEY, light colour; also few sections. Sample, 3d.—MR. W. J. LAW, The Cuckoo, Ashwell, Herts. T 24

EXCHANGE Pure White Leghorn or Buff Orpington Cockerels (March and April), Hunter's best pen, direct (others equally good), for good stocks in skeps, driven bees, pullets, or Indian Runner ducks.—BRACE, 36, Warner Street, Barnsbury. T 19

FINEST ENGLISH HONEY, 8s. per 15 lb. tin. Sample, 2d.—WITHER, Hawkenbury, Staplehurst. T 32

TWO CWT. HONEY, in 28 lb. tins, 14s. per tin; tins free.—THOMAS, Pwllcrochan, Pembroke. T 30

WHITE CLOVER SECTIONS, 7s. dozen; 2 dozen lots, carriage paid, at 8s. dozen, very carefully packed. Also Extracted Honey, 6d. lb.; 28 lb. lots carriage paid.—MRS. JUKES, North Road, Mere, Wilts. T 29

EXTRACTED HONEY for sale, good colour, £2 16s. per cwt., on rail. Sample, 3d.—HOWARD, Bassingbourn Road, Litlington, near Royston, Cambs. T27

FOR Sale, two strong stocks of BEES, on six frames natural honey; inspection invited. What offers?—DYER, Nettlecombe Court, Taunton. T 34

FOR Sale, ten HIVES, uniform pattern, best make, new, and one season's use (photo); also "Cowan," "W.B.C.," "Shepherd" hives, from 7s. 6d.; also appliances, including splendid extractor; would part exchange. Honey, poultry, wanted.—DANKS, 77, Ladywood Road, Birmingham. T 35

SMALL APIARY for sale, four strong stocks Italian Hybrid bees, spare hives, extractor, and necessary appliances for a larger apiary; seen by appointment.—13, The Circus, Greenwich. T 36

FOR Sale, three cwt. SPLENDID LIGHT HONEY, in 56 lb. tins, at 6d. per lb.; tins included. Sample, 3d.—AVERY, Deverell, Warminster. T 22

FOR Sale, guaranteed pure ENGLISH HONEY, at 6d. lb.—SIGGERS, Great Dunham, Norfolk. T 21

ABOUT one gross 30 lb. new strong honey tins; offering at 9s. dozen to clear.—ADAMS, Dunton, Biggleswade. T 33

1906 QUEENS, from healthy driven skeps, 1s. 6d., free.—BRAYSHAW, Aultmore, Keith. T 31

DRIVEN BEES for Sale, 3s. 6d. per lot, guaranteed free from disease, on rail free; pure Extracted Honey, 53s. per cwt.—DENNETT'S GREAT APIARIES, Whitchurch, Hants. T 25

2,000 LBS. LIGHT ENGLISH HONEY, 6d. lb.; quotations bulk; sample 3s.—ALBERT COE, Apiary Hall, Ridgewell, Halstead, Essex. T 28

"BRITISH BEE JOURNALS" for sale, 10 years and 5 volumes, well bound, 1886 to 1895. Will take cash or honey.—ROBERT CAMPBELL, McLean Place, Dumbarton. T 7

WANTED.—"Beekeeper's Guide Book," 12th edition, in good condition, in exchange for new copy of latest edition.—Write to MANAGER, B.B.J. Office, 8, Henrietta Street, Covent Garden, London, W.C.

ROOT'S "A.B.C. OF BEE CULTURE" (1903), perfectly new copies, 3s. 6d., post free.—MANAGER, B.B.J. Office, 8, Henrietta Street, Covent Garden, London, W.C.

HEALTHY DRIVEN BEES, 1s. 2d. lb., boxes 6d., returnable; grand young Heather Queens (fertile), in introducing cages, 2s. 6d.—HOOD, Marine Café, Whitby (late of White Heather Apiary, Pickering).

CROCUS BULBS (yellow), Arabi Alpinus slips, 100 1s. 3d., free.—BRAYSHAW, Aultmore, Keith. T11

THE NEW FOUNTAIN FEEDER, made from syrup tins, cheapest and best; bees cannot escape in refilling; try one; easily made. Send 7 stamps and lid of syrup tin; three for 1s. 6d.—Invented by H. HAWKINS, Beekeeper, Burgheath, Epsom. T 12

Editorial, Notices, &c.

BRITISH BEE-KEEPERS' ASSOCIATION

The monthly meeting of the Council was held at 105, Jermyn Street, S.W., on Thursday, September 20, Mr. T. I. Weston occupying the chair. There were also present Colonel Walker, Dr. Elliot, Messrs. R. T. Andrews, W. Broughton Carr, J. B. Lamb, and the secretary. Letters apologising for inability to attend were read from Miss Gayton, Messrs. T. W. Cowan, R. Godson, W. H. Harris, J. P. Phillips, A. G. Pugh, W. F. Reid, and E. Walker.

The minutes of the previous meeting were read and confirmed.

Three new members were formally elected, viz.:—Mr. Richard M. Brown, Holly Street, Luton; Mr. William Dunmall, Station Road, Wadhurst, Sussex; Mr. Sam Wakefield, Cross Heath Mill, Newcastle, Staffs.

Dr. Elliot presented the Finance Committee's Report, which was formally adopted.

Reports on recent examinations for Third Class Expert Certificates were received and considered. In accordance with recommendations of the examiners it was resolved to grant certificates to Miss L. F. de Quincey, Miss Stubbs; Messrs. F. W. Beamish, H. W. Beckett, W. L. Betts, R. M. Brown, Chas. Calvert, W. E. E. Charter, H. Dickman, Rev. A. Downs-Shaw, H. Fieldhouse, O. R. Frankenstein, C. Laywood, Herbert J. Moore, G. Mytton, Bertram J. Over, Edwin Pope, Walter H. Pretty, Edward Robb, A. G. Skippen, P. J. Stokes, William Davy Southcott, E. C. Waring, Thos. Wells, Geo. White and A. Wilmot.

It was decided to hold examinations for second class certificates on Friday and Saturday, November 16 and 17.

It was also arranged to hold a conversazione of members to follow the meeting of Council on Thursday, October 11. The conversazione to open at 5 o'clock, the subjects suggested for discussion being:—The New Bee Disease (Black Brood); Taking Honey from Hives; and Feeding in Winter.

The Council will be gratified by a large and representative attendance of members of the Association and its affiliated societies, particularly those who are visiting London to attend the Dairy Show.

Numerous horse and motor 'buses pass the Agricultural Hall to Regent Street and Piccadilly Circus, which is only five minutes' walk from 105, Jermyn Street, where the meeting is held. Light refreshments will be served as usual.

THE GROCERS AND KINDRED TRADES' EXHIBITION.

HONEY SHOW AT THE AGRICULTURAL HALL.

The fourteenth annual Exhibition and Market of the Grocery and Allied Trades, held at the Agricultural Hall, London, was opened on Saturday last, the 22nd inst., and continues till the end of the present week.

It was very gratifying to find a considerable increase in the number of entries compared with the previous show on the 8th inst. In other departments also more space was occupied, so that visitors to the honey exhibition had the unique experience of making their way to four goodly lengths of staging situate in different parts of the gallery in order to get a view of the whole.

The exhibits, too, looked very well indeed, six handsome trophies of honey and bee products coming first into view, followed by the classes for sections, light-coloured extracted honey, shallow-frames of comb-honey, beeswax, etc. In the light honey class the forty-eight dozen of 1-lb. jars made an imposing display, and, the quality being on the whole excellent, looked exceedingly well.

In the trophy class it was regrettable to see in one case a very fine exhibit spoilt by the introduction of things so adverse to good bee-keeping, marketable shape, and saleable honey for table use as to preclude its chance of a high place in the competition.

In another case such items as pickled red cabbage, pickled onions, etc., greatly disfigured the exhibit, even though honey vinegar was used. In the other classes the only disappointing thing was to again see capital exhibits disqualified, some for overlacing, and others entered obviously the wrong class; but in spite of disappointments and drawbacks—for which exhibitors themselves were alone to blame—it was a very fine show, as will be admitted by all who pay a visit to the Agricultural Hall before the week ends.

Mr. W. Broughton Carr, London, and Colonel H. J. O. Walker, Budleigh Salterton, Devon, officiated as judges, and made the following

AWARDS.

Outfit for Beginner in Bee-Keeping.—(No entries).

Display of Honey (comb and extracted) and Honey Products shown in suitably attractive form for a tradesman's window (6 entries). 1st (£4 and B.B.K.A. Silver Medal), S. P. Soal, Rochford, Essex; 2nd (£3), C. W. Dyer, Compton, Newbury, Berks; 3rd (£2), J. Waddell, Alwinton, Northumberland; 4th (£1), E. Waring, Dunstable Street, Ampthill; v.h.c., J. Carver, Wellington, Salop.

Twelve 1-lb. Sections (19 entries).—*One exhibit disqualified for overlacing.*—1st (£1 15s. and Bronze Medal), J. Carver; 2nd (£1 5s.), J. Clay, Wellington, Salop; 3rd (15s.), C. W. Dyer; 4th (10s.), J. Briggs, Paxton, Berwickshire; 5th (5s.), A. W. Weatherhogg, Willoughton, Lincs.; v.h.c., Rev. R. M. Lamb, Burton Pidsea, Hull; v.h.c., S. P. Soal.

Twelve 1-lb. Heather Sections (12 entries).—*One exhibit disqualified for overlacing.*—1st (20s.), J. Carver; 2nd (15s.), J. M. Balmbra, Alnwick, Northumberland; 3rd (10s.), J. Waddell; v.h.c., A. Fox, Bardsea, Ulverston; v.h.c., H. Waddington, Borobridge, Yorks.

Three Shallow-frames Comb Honey for Extracting (7 entries).—1st (£1), J. Herrod, Sutton-on-Trent, Newark; 2nd (15s.), J. Trineman, Bridgend, Lostwithiel, Cornwall; 3rd (10s.), J. Willson, Shirebrook, Mansfield, Notts; v.h.c., C. Dunn-Gardner, Fordham Abbey, Cambs.

Twelve 1-lb. Jars Light-coloured Extracted Honey (48 entries).—1st (£1 15s. and B.B.K.A. Certificate), H. Dilworth, Shangton, Kibworth; 2nd (£1 5s.), R. Morgan, Cowbridge, Glamorgan; 3rd (15s.), J. Waddell; 4th (10s.), A. Dell, Leigh, Lancs; 5th (5s.), T. G. Hillier, Andover, Hants; v.h.c., W. J. Cook, Market Rasen, Lincs; H. Geary, Leicester; H. M. Saunders, Thetford; C. Lodge, High Easter, Chelmsford; h.c., Mrs. F. Harris, Sibsey, Boston; S. G. Leigh, Broughton, Hants; C. W. Dyer; H. Cleaver, Leamington Spa.

Twelve 1-lb. Jars Medium-coloured Extracted Honey (39 entries).—1st (£1 5s.), S. G. Leigh; 2nd (£1), W. Sproston, Gt. Haywood, Staffs; 3rd (15s.), W. J. Woodsmuth, Pluckley, Ashford, Kent; 4th (10s.), T. Marshall, Sutton-on-Trent, Newark; v.h.c., J. R. Freeman, Billinghurst, Sussex; J. Willson; J. Trineman; h.c., P. E. Grinstead.

Twelve 1-lb. Jars Dark-coloured Extracted Honey (14 entries).—1st (£1), G. Marshall, Norwell, Newark, Notts; 2nd (15s.), G. Hills, Coton, Cambs; 3rd (10s.), T. Marshall; v.h.c., G. W. Kirby.

Twelve 1-lb. Jars Heather Honey (9 entries).—1st (£1), H. Waddington; 2nd, (15s.), W. Sproston; 3rd (10s.), J. Waddell; h.c., T. Richards, Church Greasley, Derbyshire.

Twelve 1-lb. Jars Heather Blend Honey (7 entries).—1st (20s.), G. H. Wynn, Haslemere, Surrey; 2nd (15s.), J. Berry, Llanrwst, N. Wales; 3rd (10s.), F. A. Kent, Dorchester; 4th (5s.), J. Carver.

Twelve 1-lb. Jars Granulated Honey.—(7 entries). 1st (£1 5s.), F. W. Gelder, Sturton-by-Stow, Lincs; 2nd (£1), C. Lodge; 3rd (15s.), J. Clay; 4th (10s.), J. Herrod.

Beeswax in Cakes, Quality of Wax, Form of Cakes and Package suitable for retail counter trade (14 entries).—1st (£1), J. Pearman, Penny Long Lane, Derby; 2nd (15s.), J. Herrod; 3rd (10s.), Mrs. F. Harris; 4th (5s.), J. Berry; h.c., W. G. Hills.

Beeswax judged for quality of wax only (18 entries).—1st (£1) C. Lodge; 2nd (15s.), J. Berry; 3rd (10s.), J. Herrod; 4th (5s.), J. Pearman; v.h.c., C. Dunn-Gardner; H. M. Saunders; J. Clay; h.c., R. Merriman; R. Lockwood; W. G. Hills.

HONEY SELLING CLASSES.

Extracted Honey in 1-lb. Jars.—by Sample with price (5 entries).—Certificates of Merit awarded to E. Matthews, H. Dilworth, F. W. Gelder, Mrs. G. Heathcote, F. Chapman.

Comb Honey in Sections with price per dozen (6 entries).—Certificate of merit awarded to E. Matthews, H. Geary, A. Brightwell, T. Hunter, F. Chapman, J. Goodhall.

Correspondence.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

**** In order to facilitate reference, Correspondents, when speaking of any letter or query previously inserted, will oblige by mentioning the number of the letter as well as the page on which it appears.*

HUMBLE-BEES WANTED FOR NEW ZEALAND.

[6436.] The Canterbury Agricultural and Pastoral Association (New Zealand) are again wanting a supply of fertilised queens of certain British species of humble-bees for the fertilisation of the red clover in New Zealand. Last autumn you were good enough to publish a letter and advertisements in the "British Bee Journal," to which many of your readers kindly responded, with the result that I was enabled to send out by the s.s. "Paparoa" a small parcel of queens, 66 per cent. of which arrived alive, thanks largely to special care taken of them by Mr. White,

As in the case of wasps, the queen humble bees are bred in the nests in large numbers towards the end of the summer (July to September). They then leave the nests, and after being fertilised they burrow singly into the ground or into thick moss or thatch, and there pass the winter

in a torpid or semi-torpid condition, waking up in the spring to found fresh colonies. Many species prefer to hibernate in banks or slopes facing north or north-west at depths varying from 6ins. to 2ft., where they are often dug up by gardeners, labourers, and others. Others species are frequently found by thatchers when removing old thatch from barns and cottages.

It will be seen by the advertisement on another page that 1s. each is offered for desirable specimens. At least ten times the number obtained last year are wanted. When found they should be placed with some damp moss in a small tin box, having a few holes pierced in it for ventilation, and sent to me by post. They should be

Bombus terrestris.

disturbed as little as possible and kept in a cool place. Specimens that may be found flying or on flowers are not wanted.

There are about twelve British species of humble-bees, and any of these are acceptable, except one common species, *B. terrestris*, and the very similar and closely allied species *B. lucorum*, also the species

Bombus hortorum.

of the allied inquiline genus *Psithyrus* (formerly called *Apathus*). The *Psithyri* may be distinguished from the true humble-bees by their dusky wings and hard, rather less hairy bodies. *B. terrestris* and *lucorum* are large black-haired species with bright yellow bands and white or tawny at the tip of the body. As there are several other large black species having yellow bands and white tip, one of which, *B. hortorum* is particularly desired, I have thought it best to make drawings (which I enclose) of the two species, showing in what way the arrangement of the yellow bands differs in *B. terrestris* and *B. lucorum* from that on *B. hortorum*, etc.

B. pratorum, a smaller black-haired species with yellow bands arranged as in *B. terrestris*, but with an orange-red (not white or tawny) tip, is desired. *B. lapidarius*, or large black-haired species with a bright red tip and no yellow bands, common in many places, and burrowing in the ground, is specially desired. All the smaller and lighter coloured species, often called carder bees or moss bees, are also desired.

Searching for these bees might perhaps be a profitable occupation for any unemployed known to "B.B.J." readers. I am anxious to receive as many queens as possible during October, the latest date for sending being October 27. It is hoped that the description given of *B. terrestris*, *lucorum*, and *psithyrus* will enable collectors to identify these and so prevent possible disappointment.—F. W. E. Sladen, Ripple Court Apiary, near Dover, September 19.

DEALING WITH FOUL BROOD.

[6437.] Mr. Bayly in his communication (6423, page 366) suggests a plan of dealing with foul brood which I have advocated in the "B.B.J." and elsewhere for some time, viz., the regular renewal of brood-combs. So far as I have had experience of foul brood in my own apiary and in the hives of others, the great source of danger lies in the honey stored in the hive. The bees in autumn rob from infected colonies, but the disease does not then appear, there being no breeding going on; but in the spring, when the infected honey is drawn on for brood-rearing, the disease shows itself. If we then feed with non-infected food the disease is checked, and if we spray with a disinfectant in addition we seemingly effect a cure especially if non-infected food be freely given or new honey be coming in. But this "cure" is only temporary, and as soon as ever the old infected stores are drawn upon for food the disease breaks out again. I have tested this thoroughly. Bee-keepers are warned against the danger of conveying infection on their clothes to other hives, but there is comparatively little danger of this unless the disease exists in the spore stage; in fact, the hive itself may be used again almost without disinfection if no spores are present. Mr. McEnvoy appears to succeed fairly in America without disinfection, but I myself prefer a 48 hours' fuming with formalin. Driven bees are safe to use after the usual quarantine; so are swarms, but I doubt if they would be safe if they came from a hive with dry spores. The success of the quarantine plan shows that the danger lies in the food. The bee-keeper must stop foul brood before it gets to the spore stage. If he does that he loses only the combs and some young brood, but if he lets it go to

the spore stage the chances are that all the crevices of the hive and of his appliances will be thoroughly infected. Stop the disease by spraying, then drive in the autumn, and feed up for winter on clean food.

I stopped a case of foul brood this spring, and on driving in the autumn found only three cells affected in the whole hive. I find that foul brood sometimes affects one or two cells only in a hive and does not spread any further, because these cells are sealed over and never get perforated, and while they remain sealed there is no danger from them.

I am inclined to think that pickled brood, foul brood, and black brood are closely related, because I have seen in the same hive specimens of all three.

So far I have usually seen foul brood in sealed cells to commence with; this I think is a mild type; the worst sort is that which attacks the unsealed grubs at all stages of growth and spreads rapidly.—W. J. FARMER, Truro, September 23.

THE CONFECTIONERS' EXHIBITION.

JUDGES AND COLOUR OF HONEY.

[6438.] I have been much interested in your remarks on the Confectioners' Exhibition, and also in the letter signed "Worker" (6428), for although your correspondent seems, as you say, to have only himself to blame for the enormous amount of carriage paid by him on his exhibit, yet in his remarks on the colour of honey for show purposes he raises a question which has certainly deterred me, and perhaps others, from competing at the big shows. I therefore take up my pen to state my own case in the hope that you will deal with our difficulties in an early issue. The honey gathered by my bees comes chiefly from sainfoin, and is of a distinctly yellow colour, some having also a slightly green tint. It certainly tastes very nice, and everyone who tries it speaks highly of it. I have only this morning received an order for a dozen 1lb. jars from a lady and gentleman, who say they never liked honey until they tasted mine. Now, if I should stage an exhibit, it will have to go into the light class, where I suppose it will be passed over in favour of some which is almost the colour of water. Again, if I turn my attention to sections, I fear my sections with their primrose coloured cappings will stand no chance against an equally good exhibit with white cappings. There still remains two other classes in which I may compete at some future show, viz., granulated honey and wax. I am anxiously waiting to see how my honey will granulate, as this is the first year I have worked for extracted honey. As to wax, I have hardly sufficient to show this year.

In conclusion, if my letter is not already too long, just a word as to the season. I started with two stocks and purchased four swarms early in June. I intended to work the two stocks for extracted, and the swarms for section honey: but as a check in the honey-flow occurred soon after the sections were put on, I removed most of them and gave shallow-frames instead. The two stocks did very well, one yielded 100lbs., the other rather over that weight. From the four swarms I secured nearly 100lbs. of extracted honey and about three dozen sections between them.—L. I., Cambridge, September 21.

MY BEE WAGON.

[6439.] At your request, I here enclose photo of my bee wagon and if it possesses sufficient interest for your readers I shall be pleased to see it in the "B.B.J." I am a beeman of long standing, having practically kept bees all my life. My father was a skeppist bee-keeper for a great part of his time, and when a lad it was my delight to be amongst the hives. In those days all beyond a certain number of skeps had to go to the sulphur-pit, and in this way I have seen as many as 12 to 14 good stocks of bees suffocated year by year. For myself, however, I did not like this bee-killing job, and when I grew up to manhood I made a start on my own account. Soon afterwards I wanted to try the new methods of managing the bees and hives, consequently the old man and myself began to differ in opinion, and he used to say "tha wilt throw all thy money away on these new fangled ways." But I persevered and made progress. I used to work my bees for section-honey only and soon saved a few pounds from the sale of my surplus honey, and when I got married later on the first thing I did was to buy a pig out of my "bee money," and in upholding the advantages of the new plan I said "Come and look at my bee-pig, dad." This just suited the old man, and pleased him much. Since then I have developed into a full-blown beeman, and have taken up my residence in a country village two miles from a railway station. But I soon found myself severely handicapped in getting the swarms I sold to the station, and as I send away a large quantity of stocks in boxes and swarms in skeps every year, the cost of conveyance to the station, 1s. 6d. each time a lot was ready for despatch, soon became a serious loss. Sometimes four of five swarms to go at once, and sometimes only one, but the cost was always 1s. 6d. This I could not stand, so I said to my wife, who is a real beeman's wife and helper (she hives more swarms in the season than I do myself), if "I live till another season I will save this 1s. 6d.

per journey," and this is how I did it. I purchased four old cycle wheels and set to work, and I soon had a good bee-wagon of my own making, and on which I can convey 12 swarms in either boxes or skeps to the station at once, and there is no shaking or damage done. So I thought that it might be helpful to some brother bee-keeper situated like myself to see the result. Your readers will see at a glance that the boxes and skeps shown are "empties" which were returned after the bees had been delivered to purchasers, and the "pony" in the shafts is your humble servant. The wagon is 6ft. long and 15ins. wide, the wheels being put under the frame-work much in the same way as any other wagon. They have a through axle, and the front wheels are fixed on a loose pivot for turning round. I may say when I go my rounds delivering and selling honey and helping bee-keepers I always take a few copies of the "B.B.J." and give them to those who are not already readers. I travel all over our district among the bees. Last year I had 105 stocks under my management, so your readers can guess that I had some work on my hands. I overhaul as many stocks in one year as any one man in this part of the country, which is a splendid place for bee-forage. I am also pleased to say only one bad case of foul brood has come under my notice, and I have some splendid "takes" of honey, and can always sell my produce at a fair price. We often hear it asked: Does bee-keeping pay? I answer yes, and pays well under good management. I also advise all beginners to furnish themselves with Mr. Cowan's "Guide-book," many dozens of which book I have circulated in this part of the country. Wishing good luck to all readers.—E. J. T., Gowdall, Snaith, Yorks.

A HOME-MADE BEE-WAGON.

RENDERING BEESWAX.

[6440.] Now that the honey season is over, the melting up of old comb and pieces of wax—if not already done—needs attention; for this purpose many kinds of wax extractors are sold, but nothing I have yet tried comes up to washing in the upper part of a honey-ripener followed by melting in a saucepan. For the benefit of those who have not tried this plan, it might, perhaps, be useful if I described more particularly how this is done.

First, the upper part of honey-ripener is filled with the comb etc., and then placed in a tub—an ordinary washing-tub will do—containing enough cold water to float the wax; the wax must then be broken up and rubbed with the hands until not a particle of honey or soluble dirt is left, changing the water once or twice during the operation; the wax is then allowed to drain, so that all water may escape through the strainer in the honey-ripener; it only remains to melt the wax in a saucepan over a slow fire, and pour into a mould, in which a piece of muslin has been laid. Lift the

muslin and the wax will be left in the mould, the refuse being retained in the muslin. In order to prevent cracking, a piece of newspaper under the mould, and a piece of thick paper or cardboard above, will have the desired effect.

This operation takes less time, is less messy, and produces wax of a much better colour than when an ordinary or solar extractor is used.—ERNEST H. OLDHAM, Southgate, September 24.

THE LESSONS OF A BEE SHOW.

DISAPPOINTED VISITORS.

[6441.] For some time past I have been watching the "Bee Shows to Come" column in the B.B.J., and noted that of the "Surrey Bee-keepers' Association." I am one of those who have the Saturday half-holiday (a day, when a good many men get away from business) and took the opportunity of attending at the Crystal Palace in the hope of learning something in the bee line. Judge then of my disappointment on arrival at finding half of the exhibits railed off and guarded by a burly man in blue; only a privileged few being allowed within the sacred precincts. The bee tent had been removed, and there were no manipulations or lectures which I most wanted to see and hear, and from what could be gathered from those around. I was not alone in the general disappointment.

I notice one of the objects of the Association is "to spread a knowledge of the industry and encourage all who can do so to practice bee culture."

To hold a show on what was evidently regarded as an unsuitable date (being practically a free day), and to deny prospective bee-keepers the privilege of taking home a few tips, does not tend to promote the objects of the Association, and is money and energy wasted. These shortcomings were made up to some extent by the kindly attention and explanations of the makers' representatives who were most courteous and obliging.

I hope to make a start in the craft next spring, my teacher being the "Guide-book," which has had a fascinating interest for me (name sent for reference).—"SOUTH NORWOOD," September 24.

BEES IN THE ISLE OF MAN.

[6442.] I herewith enclose a few notes on my second year's work among the bees. I have had a very successful season in every way. My best stock has yielded three full 10-frame supers and a 5-frame nucleus. The bees are Italian hybrids. Several other colonies have given two supers, while from my second best hive I took a rack of sections in addition. Last season I was troubled with excessive swarming, but this year I have only had two swarms from ten stocks, thanks mainly to your teaching in the "B.B.J." The swarms were returned to their respective hives, and I thus kept work going on in supers without a break. No honey was stored during the greater part of August, the weather being very bad; practically all my honey was collected by the end of July and a little during the early part of September.

I am indebted to the JOURNAL and GUIDE BOOK for being able to diagnose two cases of foul brood among my stocks in May. After treating them, according to the most known plans, I was disappointed to find the disease reappear in the combs, so I promptly burnt both lots.

I am also indebted to your able contributor, D. M. M., Banff, for his method of clearing supers. I have found it so successful that I shall alter my other hives so as to make them suitable for this plan of working. I find it better to work among the bees without veil or gloves whenever possible, as it causes less disturbance in the apiary. When swarms settle on trees I find it the best way to climb the tree and fasten a line to the branch on which the bees have settled; then cut the branch and lower it into an empty hive. This done I place skep on top and cover the whole with a sheet. The operation never takes me more than about fifteen minutes. I shall be obliged if you will let me know if it is an advantage to winter stocks with a super left on? If this is done I take it that the excluder will have to be removed? I expect the bees would winter in the super and the queen lay there in spring.

Without being able to say how much honey my stocks would average, but there is more honey in my house than I have ever seen during my life.—J. J. MOUGHTON, Laxey, I.O.M., September 24.

[We never leave supers on hives in winter.—EDS.]

THOUGHTS ON QUEENS.

THE SEASON IN NORTHUMBERLAND.

[6443.] In looking through my B.B.J.'s for the last four weeks, I find that several writers have touched upon the question of queens other than the native variety. Now, the variety which is brought most prominently before us by advertisements, etc., is the Italian, and I would like to ask: What are the points which are used to recommend it? Is not great stress laid on its being, first and foremost, peaceable and a good honey gatherer? two points which are extremely desirable, so much so that beginners—as soon as they have mastered the operation of queen-introduction, are strongly tempted to Italianise all

their English stocks. Well, what happens as a natural consequence? Why, in two years after the change of breed we find them complaining of the viciousness of their bees, owing to the young Italian queens mating with English drones. If we could be sure that the foreign queens would mate with foreign drones, it might be more profitable to keep them than the English, if we work for extracted honey; but for comb honey, they cannot touch the old English blacks. I must confess that it is an advantage to the bee-keeper when his English queens cross with the Italian drones, but for them to cross in the other direction is to produce a race of "stingers" rather than one of good honey-gatherers.

Bees at the Heather.—I was glad to see Mr. Tom Sleight's note on page 354. I have five stocks at the moors, three of which were worked on the "Alexander system" up to the end of July, and are now on ten frames with forty-two sections on the top. On August 30 I received word that these three stocks were hanging out, so I put another rack of twenty-one sections on the top of the others, to act as a cooler, and in doing so I noticed that the racks then on were well on towards completion, so, given a continuance of fine weather, I should secure sixty-three sections from each of these hives. The other two stocks (swarms hived in June) were not quite so forward. The season all through, however, has been a record season here, and bee-keepers generally are in a good humour with themselves.

In conclusion, my opinion as regards breed of bees best suited for a locality like ours, where there is clover and all the summer flowers natural to an agricultural district, followed by heather in the autumn, is that the blacks cannot be excelled and in many cases not equalled. Finally, keep your queens young, by preventing swarming and requeening each year after heather is finished.—J. H. Willcox, Haydon Bridge.

AMERICAN AND COLONIAL PAPERS.

EXTRACTS AND COMMENTS.

By D. M. Macdonald, Banff.

Age of Queens.—So good an authority as Mr. Doolittle has the following to say on this interesting subject:—"The superseding of all queens as soon as they are two years of age is quite a task, even if it were necessary, but when we come to consider that, with the rank and file of bee-keepers, most queens are as good the third year as the second, while very many queens prove good the fourth year, unless the apiarist uses such strenuous plans that they are overworked. Queens with me are good and prolific for three years, and some are doing good work in their fifth year. It is a waste of time to go through this work of re-queening simply for the reason that some unthinking person (unthinking along this line) has recommended such a course." This is a very large admission, especially from a queen rearer. I noted just lately that another large beekeeper supersedes on the principle of failure in keeping up the pace to his minimum requirements. This shows right good sense. Some of my more aged queens this year did very well, whereas some of this year's breeding have already been sacrificed. A bee-keeper near says all his young queens of last year swarmed this season, but two or three old ladies stuck to active work. Age in a bee is no true criterion of its senility, and the same holds true of queens. In both cases *work* ages more than length of days.

The Best Bee in Switzerland.—One thousand Switzers are engaged in queen rearing, and of these 77 per cent. favour the black bee; 15 per cent. prefer hybrids, and 6 per cent. Carniolans, leaving only 2 per cent. for other races, including Italians. One of the Beekeepers' Associations sent to its members cards, asking which race of bees they preferred. 1,865 voted for blacks, 393 for hybrids, 147 for Carniolans, and only 48 for Italians. The Editor of American B.J., from which paper I quote, adds:—"And the majority is sensible."

Strong Colonies.—Our Canadian cousins are more than ever convinced of the importance of having stocks strong to ensure the best success. Mr. Pettitt says:—"Some of the colonies came through the spring in a weak condition. These have been almost at a standstill ever since. While strong ones have gained tremendously, and stored surplus, medium ones have built up strong, but have stored nothing, and weak colonies are weak still in mid July." Although he recognises that there are other influences at work he evidently credits the queens with at least a large percentage of the deterioration, and then proceeds to give a pretty good rule for regulating supersedure. The queen's work is watched from week to week, and if she does not gain—if the brood chamber assumes that honey-bound appearance so indicative of a poor queen—off comes her head. The same rule is followed with Dr. Miller's bees. Miss Wilson says:—"If a queen is doing good work she is not killed on account of age, but if her work is poor she is deposed at the first convenient opportunity."

Feeding Bees with Sweetened Water.—A writer in the "American Bee Journal" believes in this form of stimulation as the best and safest. "I feed in spring only sweetened water, three fourths lukewarm

water and one fourth honey. Fed thus it does not tax the strength of the bees as it does when they have to fly out and sip ice cold water. I thus save thousands of bees, and not only that but the temperature of the cluster is not lowered, which saves brood from being chilled. The bees evaporate my sweetened water, and their continual activity will cause the queen to become more prolific. Bees thus fed gave me 250lbs. per colony on an average, while my neighbours, who are pretty well up to date beekeepers, got barely 100lbs."

Differentiating Types of Foul Brood.—It is quite getting the fashion among some American editors to speak of American and European foul brood. It has been recognised for several years now that there are two types of it in this country, or at least that different outbreaks are more or less virulent. We have had it reported on what may be considered reliable authority that cures have been affected in many instances, and even in some cases assertions have been made that it has cured itself. The other type runs riot with the strides of a giant, and death and extinction inevitably follows. Nothing but annihilation by burning can *cure* that stock. Hundreds can testify to this as the fruits of sad experience. Some remarks by the editor of the "Beekeepers' Review" deserve consideration, but I can only cull a few sentences as follows: — American and European foul brood seems to be the names decided on by a majority of the inspectors. There are wide differences between these two types of the disease, but it would be difficult to say which was the most destructive. Black European foul brood is certainly more virulent when it appears first, but after a time it loses its virulence in a large degree. It may appear and then disappear. American foul brood never cuts such capers. Once it is in a colony it stays, unless removed by the hand of man. The scale of the American variety, when it dries down, sticks to the side of the cell so closely that it is impossible for the bees to remove it. In the European variety the scale can be easily removed. The bees can very easily clean out the cells if they choose; something that they cannot do with the American variety. The bees seem to be able to resist and overcome the one, in the other case when the cells become infected the disease stays there. The bees can't clean it out, and the time finally comes when there are few clean cells in which to rear brood; and, even in clean cells, the brood is almost certain to become infected from the food that is given it. The colony is doomed." The above extracts will give the American idea of differentiating; but I venture to assert that the ripe experience of our junior editor (W. B. C.) in handling specimens from all parts of Great Britain and Ireland will bear me out in stating that we have this latter type present in this country in its most virulent form. Mr. Samuel Simmins seems to be the chief authority on which American editors base their theory of the mildness of our foul brood. I often think this gentleman must have had experience of only the milder type; because *I know* his professed cure cannot extinguish the virulent form of foul brood.

[We cordially endorse Mr. Macdonald's statement with regard to the—no doubt unintentional—misleading nature of the editorial remarks quoted above. Whatever weight our American friends may attach to the views of Mr. Simmins' as an authority on foul brood we feel it incumbent on us to say that the Editors of THE BRITISH BEE JOURNAL do not share the opinions of the gentleman named in the slightest degree. In fact they are directly opposed to him on the question. Mr. Cowan's views on the subject of foul brood as set forth in the "Guide Book," are in accord with the teachings of science, added to the author's personal experience in dealing with the disease. Nor are the views of the junior editor (W. B. C.) less pronounced, and are recorded in the pages of the "B.B.J." week by week. So there need be no uncertainty and no difficulty with our American contemporaries in judging of European foul brood as it is known in this country. Not being contributors to American bee-papers we leave our good friends over there to inform themselves with regard to British authoritative opinion with the materials in their hands, and if they fail to do this the fault is not ours.—EDS.]

Queries and Replies.

[3410.] *Dealing with Foul Brood in "Wells'" Hive.*—When giving my four stocks the final look through, as I hoped, the other day, before packing them down for the winter, I discovered one lot (one side of a double hive) affected with foul brood, though not badly. The next evening I proceeded to make an artificial swarm of the affected bees, but found that, instead of running into the empty box where I wanted them to enter, they had run along the flight-board, forced the grass out of entrance of the other stock, and were swarming in there. So I had to artificially swarm the second lot as well, though they were perfectly healthy. I starved them for forty-eight hours, and then put them in a clean hive, and am feeding up on medicated syrup. I hope, therefore, that they will now be all right. What I want your advice about is the combs in shallow-frames and half-filled sections which I took off that stock. After extracting the contents, I am afraid

some of them got on to my other two stocks (now perfectly healthy) to be cleaned up, and as I had about twenty-one partly filled sections, I filled the rack with them, and would now like to have them cleared up if you think it safe? The shallow-frames are already cleaned up, so I cannot remedy that if entails any risk of mischief being done. I therefore ask:—1. Is there any risk of infection from shallow-frames taken from infected hive? 2. If so, would the risk be removed by thoroughly fumigating with burning sulphur, and then spraying with Izal, and would they then be fit to go on next year? or, 3. Must the whole of them be melted up, and next year, after boiling supers and section racks, start again with clean foundation? 4. With regard to the two stocks which I found healthy, but which had helped to clean up empty combs, I may say I am hoping to keep them healthy by keeping the quilt of each damped every few days for the next two or three weeks with disinfectant. Do you think it sufficient precaution? Name sent for reference.—A. C. H., Sussex.

REPLY.—1. If spraved with soluble phenyle we find no harm to follow the use of combed sections, from slightly affected stocks. 2. There is little or no advantage in fumigating in such a case. 3. No. 4. We should not damp the quilts with disinfectants at all. No advantage would be gained thereby.

[3411.] *A Beginner's Queries.*—I would be glad if you will give me some information on the following subjects:—I am a beginner at bee-keeping, having started with no more information than I found in the "Guide Book," with which, and a load of firewood, I constructed a Cowan Hive and peopled it with a swarm in June. Since that time I have carefully studied each of your valuable periodicals as they appeared. There is no brood in the hive now, all combs being filled with honey, and nothing has been done in the supers. I suppose I should have hived them on seven or eight frames instead of ten, adding the other frames later in the season; but, to make certain, I ask:—1. Is this not so? 2. Next year I want honey, not increase, I propose, therefore, at an early date (say end of March) next season, to extract all honey from nine frames of brood-chamber, then replace them and add a rack of shallow-frames fitted with full sheets of foundation, and immediately commence feeding with syrup. If this is done, will the bees put the syrup given into the shallow-frames as required, and leave the whole of the brood-box for breeding? 3. The rack of shallow-frames would be allowed to remain permanently afterwards, and racks of sections given above for storing surplus in. Is this the best course for me to pursue, honey being my main object? 4. I have no extractor, and as £ s. d. has to be considered, I will make one myself if you will let me know the best distance from face of the comb to centre of extractor? 5. At what temperature is it safe to open a hive in winter? Wishing your journals every success, I send name and sign—COUNTY, Staffs, September 22.

REPLY.—1. There is no reason why a June swarm should not be hived on ten frames, if the season warrants it; but it is advantageous to contract the hive at first in order to facilitate comb-building, adding the full number before supering. 2. We strongly advise you to leave the honey now stored in the brood-body of hive where it is, unless there is more of it than really required for the bees' use during winter and early spring. This should not be less than 25lb. when the bees are packed down for winter. The clearing out of surplus food from brood-body is best left till early spring, when "stimulating" begins. 3. If the shallow-frames are left on the hive all winter, and no queen-excluder between them and the brood-chamber below, early breeding will start in the shallow-frames, which is very undesirable. 4. You will find it an extremely difficult task to make an extractor from the vague bit of information asked for in your query. We advise you to try and get the loan of an extractor as a pattern to work from; without this the chance of your home-made machine being serviceable is, we fear, somewhat remote. 5. Don't be guided by the thermometer at all when the question of opening hives in winter arises; be guided by the bees themselves. When they are on the wing and flying freely, you may be sure that no great harm will follow inspection of the combs. It will lower the temperature of the brood nest for a time, but that does not matter. On the other hand, don't open hives in winter unless there is real necessity for so doing.

Bee Shows to Come.

October 9 to 12, at the Agricultural Hall, London.—Show of Honey and Bee Produce in connection with the British Dairy Farmers' Association. Numerous and liberal prizes for honey, etc., including the valuable Silver Challenge Cup of the B.B.K.A. **Entries closed.**

October 18 to 21, at Waverley Market, Edinburgh. — Honey show in connection with the Tenth Annual Edinburgh and Midlothian Industrial Exhibition. All open classes. Beautifully illustrated prospectus, price 2d., from A. Hutchinson, 15, Leith Street, Edinburgh **Entries close September 27.** (See advt. p. v.)

October 18 and 19, at Kilmarnock, N.B. —Honey Show in connection with the annual exhibition of the Ayrshire Agricultural Society. Schedules on application to John Howie, Secretary, 58, Alloway Street, Ayr. **Entries close October 5.** (See advt. p. v.)

November 9 and 10, at Chorley, Lancs. —Honey Show of Lancs. B.K.A. in connection with Chorley Chrysanthemum Society's Annual Show. Four Open Classes. Exhibitors allowed to bring honey for sale. Schedules from W. G. Smith, Town Hall Auction Rooms, Chorley, Lancs. **Entries close November 3.**

Notices to Correspondents & Inquirers.

AMATEUR (Northumberland).—Bees Hanging Out in September.—The hanging out you complain of is, no doubt, caused by the hives being too warmly covered and wrapped with the felt mentioned. Six quilts on each hive is altogether unsuitable in such a warm month as this has been. If the hives are too crowded and the heather is blooming well, we should give another rack of sections below that already on.

F. W. HUNT (Devon).—Yellow Bees from Native Queen.—It is quite clear that the queen in question has mated with a Ligurian or some other variety of yellow drone. It seems curious that with "ten hives of blacks in your own apiary, and twenty other colonies of blacks within a mile, and plenty of drones in all of them," your young queen should meet a yellow drone, but the fact of her having done so is quite apparent. You must bear in mind that with Italians four miles away, as stated, it would not be at all strange to see cross-mating, when we know how very rapidly both queens and drones fly when intent on mating.

J. FAIRALL (Hellingly).—News of Mr. Frank Benton.—Reference to our issue of June 22 last year (page 241), will show that Mr. Benton is not only alive and well, but is now engaged on an expedition connected with apiculture on behalf of the U.S.A. Department of Agriculture, and that, as the accredited agent of the American Government, he is travelling more than half round the world seeking for bees and bee-forage plants likely to be of advantage to American bee-keeping.

BAZAAR (Weybridge).—Bee Demonstration in November.—We cannot give much hope of a "demonstration with live bees" at a bazaar in the month of November being a success. In fact, the chances are in favour of the bee-show turning out anything but an attraction to visitors. 2. An observatory hive might certainly be kept on view if staged in a warm room and well wrapped up at night.

JAS. HOWARTH (Westhoughton).—Removing Supers.—Supers should be removed from hives as soon as the honey harvest begins to fail. In your case, if there is no heather within reach, the time for removal should be when second-crop clover has ceased flowering.

Suspected Combs.

E. B. (Rhyl).—The four pieces of comb sent are almost wholly filled with honey and pollen, the few cells not so occupied contain no foul brood, but dead larvæ in different stages of development, some full grown and dead from "chill" only. In view of this, and your having already destroyed the bees, there is no need for special precautions in having the hive disinfected. Ordinary washing out with hot water, with a good handful of common washing soda will therefore suffice.

F. T. C. (Maidstone).—There are slight signs of incipient foul brood in comb sent.

ANXIOUS (Bristol). The comb sent is free from foul brood, but the remains of dead larvæ in several cells bear the appearance of "black brood," or "New York bee disease," so named from its having first appeared in the State of New York. If you defer any attempt at cure till spring, as proposed, you may hear some particulars regarding the disease in question in our pages, as the matter is to come up at the conversazione on October 11.

*** *Some Queries and Replies, &c., are unavoidably held over till next week.*

Special Prepaid Advertisements

Twelve words and under Sixpence: for every additional Three words or under, One Penny.

QUEEN HUMBLE BEES WANTED.—One shilling each offered for hibernating queen humble bees of any species (except "Bombus terrestris" and "Lucorum" and "Psithyrus), delivered alive to F. W. L. Sladen, Ripple Court Apiary, near Dover, during October (not later than October 27), for shipment to New Zealand. For particulars as to where to search for, and how to distinguish the various species, and how to pack them, see letter in "B.B.J." of September 27, page 382. T 40

WANTED, QUANTITY OF GOOD SECTIONS.—R. CARTER, Chartridge Green Farm, Chesham, Bucks. T 39

DRIVEN BEES WANTED, 6 lb. lots, cheap, without queens.—WALLACE, Bramhall, Stockport. T 38

1906 GRANULATED LIGHT HONEY, pound screw bottles, 8s. 6d. dozen; yellow crocus, snowdrops, 1s. 100; daffodils, white narcissus, 1s. 6d. 100, 2½d. dozen; mixed narcissus, daffodils, 1s. 100, 2d. dozen; hyacinths, 1s. 6d. dozen; Chapman honey plant, 3d. packet, post free.—WEST, 83, Stoke Road, Gosport. T 41

THREE WELL-STOCKED SKEPS, HEALTHY BEES, 12s. each; Driven Bees, 1s. 3d. lb.—S. DARLINGTON, Charing, Kent. T 42

FOR SALE, 20 lb. THIN SUPER FOUNDATION, 1s. 3d. lb., or would exchange.—GRANT, Huyton, Lancs. T 44

1 CWT. HONEY for sale, in ½ cwt. tins.—D. COLE, Hertingfordbury, Hertford. T 45

EXTRACTED ENGLISH HONEY, 11s. per 28 lb. tin; sample, 2d.—DUTTON, Terling, Essex. T 46

APIARY, with connection, 14 bar-framed hives, double walls, cork packed, strong, healthy stocks, average yield 75-20 lb. each, complete outfit.—HUDDER, Stoke-by-Mayland, Colchester. T 48

20 DOZEN 1 LB. SCREW-TOP JARS LIGHT EXTRACTED HONEY, 9s. dozen, carriage paid; sample, 2d.—TILLING, Hessenford, Cornwall. T 47

FOR Sale, six SHEEP DOG PUPS, on rail, 10s. each. Particulars, 1d. stamp.—RIDLEY, The Apiary, Horney Common, Uckfield, Sussex. T 14

HEALTHY DRIVEN BEES, with Queen, in 4 lb. or more lots, at 1s. 3d. per lb.; boxes returnable, or will be charged for.—R. BROWN, Flora Apiary, Somersham, Hunts. S 47

QUEENS, Pure Imported Carniolan, 1906, guaranteed fertile, 6s. each.—OVERTON, Crawley, Catalogues of appliances free. T 43

CLOVER HONEY (guaranteed pure); 1 lb. screw-cap bottles, 77s. gross., 7s. dozen; ½ lb. ditto, 45s. gross., 4s. 6d. dozen; bulk, 48s. cwt., 25s. 56 lbs.; sample, carriage paid, 8d.—TURNER BROS, Sandpit Poultry Farm, Croydon T 49

GUARANTEED HEALTHY DRIVEN BEES, 5s. per stock, with 1906 Queen; bees with four standard frames, stores, brood and queen, 10s.; Queens, 1906, 2s. 6d.; stocks in skeps, 12s. 6d. and 13s. 6d.; Stores good.—W. WOODS, Normandy, Guildford. T 18

SMALL APIARY for sale, four strong stocks Italian Hybrid bees, spare hives, extractor, and necessary appliances for a larger apiary; seen by appointment.—13, The Circus, Greenwich. T 36

FOR Sale, three cwt. SPLENDID LIGHT HONEY, in 56 lb. tins, at 6d. per lb.; tins included. Sample, 3d.—AVERY, Deverell, Warminster. T 22

2,000 LBS. LIGHT ENGLISH HONEY, 6d. lb.; quotations bulk; sample, 3d.—ALBERT COE, Apiary Hall, Ridgewell, Halstead, Essex. T 28

HEALTHY DRIVEN BEES, headed 1906, Queen, 3s. 6d., 4s. 6d. per lot, f. o. r., receipt of order package free, 15th season; less per quantity. Standard Frames of food, 4 to 6 lbs. weight, 1s. 6d. Medicated Honey and Sugar Candy, New Process, 4s 6d. per 14 lbs. Fine Light Honey 56s. per cwt., tins free, sample 3d.—W. H. BROWN, Expert, 1, High Street, Shrewsbury.

Editorial, Notices, &c.

SURREY BEE-KEEPERS' ASSOCIATION

ANNUAL SHOW AT THE CRYSTAL PALACE.

The eleventh annual show of the Surrey B.K.A. was held at the Crystal Palace on September 20, 21, and 22, and was again a complete success, resulting in one of the largest displays of honey and bee-produce, bees, hives, and appliances, staged at any exhibition held this year, the entries numbering nearly 300.

The honey staged made a fine display, both in the members' and open classes, the latter being of a very high character.

In consequence of the enormous crowds visiting the Palace on the last day, the honey exhibits had to be railed off for the protection of the exhibits.

The trophies were a distinct feature, as was also an interesting and instructive exhibit connected with bee-culture, staged (not for competition) by the hon. secretary as an educational object-lesson. This exhibit occupied some twenty feet run of staging, and attracted much attention. There were five large collections of hives and appliances.

Altogether, the exhibition was of a most interesting and instructive character, and it is hoped will do much to promote the bee-keeping industry in this country.

The judges were Dr. Elliot, London, and Mr. A. J. Carter, Billingshurst, Sussex, who made the following awards:—

MEMBERS' CLASSES.

Twelve 1-lb. Sections.—1st, A. P. Short, Thornton Heath; 2nd, E. Bontoft, Caterham Valley; 3rd, G. B. Bisset, Wallington; h.c., F. Bowers, Coulsdon, and H. Tobutt, Wallington.

Six 1-lb. Sections.—1st, A. P. Short; 2nd, T. W. Ringer, Tatsfield; 3rd, J. Miles, Cheam; v.h.c., F. Greene, Cranleigh; h.c., F. J. Bernau, Reigate.

Six 1-lb. Heather Sections.—1st, A. Seth-Smith, Cobham; 2nd, E. P. Betts, Camberley.

Three Shallow-Frames of Comb Honey.—1st, A. P. Short; 2nd, A. Watkin, New Malden; 3rd, J. Kachler, Croydon; h.c., A. Watkin and T. W. Ringer.

One Shallow-Frame of Comb Honey.—1st, A. Watkin; 2nd, H. Tobutt; 3rd, R. Luff, New Malden; h.c., A. Watkin and T. W. Ringer.

One Standard-Frame of Comb Honey.—1st, S. R. Whitley, Lingfield; 2nd, A. E. C. Mumford, Redhill; 3rd, J. Kachler.

Twelve 1-lb. Jars (Light) Extracted Honey.—1st, A. P. Short; 2nd, J. Docura, Horley; 3rd, T. Chater, Wallington; v.h.c., E. Bontoft; h.c., Mrs. C. E. Bisset, Wallington, and P. W. Worsfold, Shalford.

Six 1-lb. Jars (Light) Extracted Honey.—1st, A. P. Short; 2nd, T. Chater; 3rd, F. E. Marshall, Worcester Park; v.h.c., C. H. Rose, Wimbledon; h.c., E. T. Grove, Ewell, and T. W. Ringer.

Six 1-lb. Jars Extracted Heather Honey.—1st, E. P. Betts; 2nd, G. Bullen, Cobham; 3rd, A. Seth-Smith; h.c., J. Sharland, Haslemere.

Six 1-lb. Jars (Dark) Extracted Honey.—1st, E. T. Grove; 2nd, J. Sharland; 3rd, J. Kachler; h.c., Mrs. Bisset; C. A. Overton, Charlwood; and S. Silvester, Worcester Park.

Six 1-lb. Jars Granulated Honey.—1st G. Wynn, Haslemere; 2nd, J. T. Hurdwell, Camberley; 3rd, F. Perigal, Kingswood, Reigate; h.c., Miss Wickham Jones, South Norwood, A. P. Short, and W. Sole.

Display of Honey and Bee Products.—1st, T. W. Ringer; 2nd, F. B. White, Redhill.

Beeswax.—1st, E. Bontoft; 2nd, A. P. Short; 3rd, A. E. C. Mumford; h.c., F. J. Bernau and T. Chater.

Articles of Food containing Honey.—1st, Miss Wickham-Jones; 2nd, A. E. C. Mumford; 3rd, F. J. Bernau.

Six 1-lb. Jars Extracted Honey (non-previous winners only).—1st, F. E. Marshall; 2nd, A. P. Short; 3rd, F. Poupart;

Hive given by the Baroness Burdett-Coutts, President B.B.K.A. (cottagers only).—1st, C. Monk, Kingswood, Reigate; 2nd, P. W. Worsfold; 3rd, S. Silvester.

OPEN CLASSES.

Six 1-lb. Sections.—1st, H. Hillier, Andover; 2nd, C. Lodge, Chelmsford; 3rd, Miss Capp, Chelmsford; v.h.c., H. Clarke, Icklesham; h.c., A. Sunley, South Milford, Yorks.

Six 1-lb. Jars (Light) Extracted Honey.—1st, J. Lee and Son, Highbury; 2nd, E. L. and H. C. Jones, Andover; 3rd, H. Hillier; v.h.c., W. J. Norman, King's Lynn, and E. and H. Jones; h.c., W. Morgan, Cowbridge; H. W. Saunders, Thetford, Norfolk; and W. J. Cook, Market Rasen.

Three Shallow-Frames of Comb Honey.—1st, E. C. R. White, Newton Toney, Salisbury; 2nd, J. Lee and Son; 3rd, C. Lodge.

One Shallow-Frame of Comb Honey.—1st, E. C. R. White; 2nd, C. Lodge; 3rd, J. Kachler.

Beeswax.—1st, E. C. R. White; 2nd, C. Lodge; 3rd, H. W. Saunders.

Interesting Exhibit connected with Bee Culture.—1st, T. Carl, Crawley.

Observatory Hive with Bees and Queen.—1st, A. E. C. Mumford; 2nd, C. S. Greenhill, Wimbledon; 3rd, C. T. Overton and Son, Crawley.

HIVES AND APPLIANCES.

Collection of Hives and Appliances.—1st, J. Lee and Son; 2nd, C. T. Overton

and Son; 3rd, E. H. Taylor, Welwyn, Herts; v.h.c., Mrs. Seadon, Bromley, Kent; h.c., C. S. Greenhill.

Complete Frame-Hive for General Use. (Price not exceeding 15s.)—1st, E. H. Taylor; 2nd, C. T. Overton and Son; 3rd, C. S. Greenhill.

Outfit for a Beginner in Bee-keeping. (Price not to exceed 30s.)—1st, E. H. Taylor; 2nd, C. T. Overton and Son; 3rd, J. Lee and Son.

Mr. C. T. Overton, bee-expert, gave lectures and demonstrations at intervals in the bee tent to large and appreciative audiences.

Correspondence.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

**** In order to facilitate reference, Correspondents, when speaking of any letter or query previously inserted, will oblige by mentioning the number of the letter as well as the page on which it appears.*

AMONG THE BEES.

THE EVOLUTION OF THE MODERN HIVE.

[6444.] They had hives of diverse shapes and sizes in various countries in olden times. Some were of osier, some of bark, some of hollowed trees, and some of square boards "three feet high and a foot broad." Some were made of earth, and some of rods or wicker work, daubed within and without with cow dung. Pliny records that in his time hives were made of all these materials and of many shapes, but he also states that a Roman Consul had one made of "very clear horn," by means of which bees were observed at work. It is a fact worth noting that a kind of reaping machine was also invented about the same period, so they must have been go-ahead times, both in agriculture and apiculture. Certain hives now used in savage countries are of tiles, rounded and shaped roughly, with a door at the end for taking out the honey; and in India at the present time one of the same shape is kept within the dwelling, built in sections, so that the inner part may be withdrawn, and the honey appropriated without disturbing the bees.

It is a curious fact that, notwithstanding the many important attempts for nearly two hundred years to evolve something which would oust the old straw skep, that practically, bee-keeping was carried on just about a century ago much the same as it was prosecuted in the most primitive times when the first dawn of change began to appear in the form of bee-literature. Nay, so tardy were the newer modes in making any headway, that it may be said that bee-keeping was carried on then, and in many places till quite recently, in a less enlightened way than it was two thousand years ago in some of the more enlightened countries of the world. Not that discoveries were unknown, or that certain changes and improvements had not taken place, for we must acknowledge the good work done by Merve and Gedde and Shirley, and many others treading in their footsteps, in evolving hives which at least paved the way for the improvements of later times. The hive patented by Gedde in 1675, whatever may have been the genesis of its origin, secured kinder and more humane treatment for the bees, cleaner and fairer honey, stronger colonies, and, consequently, greater quantities of pure surplus from each hive. All these inventors kept that commendable desire, "humanity to the honey bee," in the forefront of their improvements, and whatever advance was made, we may safely say our countrymen stood ever in the van, so that in hives, as in books, they were in the front rank, and made it possible by their search after light and knowledge for moderns to arrive at the (qualified) state of perfection to which we have now arrived in the matter of hive construction.

These seekers after light travelled different roads. Out of the old dome-shaped straw skep was evolved Huish's halfway house, which later became Neighbour's hives—the essence of perfection as far as straw allowed man to travel. Along an almost parallel path walked those who with wood instead of straw sought (but did not find) perfection on the naidiring principle, which before the days of comb foundation was perhaps the most probable route. Many others, from the days of White, or earlier, sought to secure perfection in honey production by means of their collateral hives, with brood body and side pavilions for surplus. Each of these three classes had their ideal of what a bee-hive should be, and did their best to carry their system to perfection. But, after travelling so far in their journey, it appears to me all three landed in a *cul de sac.*

But let us revert to ancient times. At first, in constructing bee-hives, rough osier, willow, or other twigs were bent into any convenient shape, and the interstices, after cross-weaving them, were carefully daubed and coated with clay, slime, or cow dung, to keep the bees in and the cold and wet out. Rough and unshapely many of these domiciles undoubtedly were at first, for each designer and constructor was a law unto himself. But at a very early date some compromise between

square or parallel walls would take place, with the object of making something of a roof to ward off moisture more effectively. So out of this evolution gradually brought about the dome-shaped form so common for centuries.

Another point leading to the same result, at even an earlier date, would be the observation of the disposition of clustering bees to assume a rounded form. They would also note that the queen, in disposing of her eggs, followed much the same rule. So, almost as a result of natural laws, we find a hive curved at the top or rising up to a dome-shape. It was early recognised that bees were able best to defend themselves from cold when clustered in the manner of a sphere, so that men's minds readily adapted themselves to supply the want with a shape "that is likest to an egg with the top cut off." All the "philosophers" asserted that the bees' cluster being in the form of a globe were better able to generate heat and keep it up with less expenditure. Thus practice and philosophy went hand in hand in reciprocal accord to bring about the housing of bees in dome-shaped hives, which became their almost universal home for long ages.—D. M. M., Banff.

(To be continued.)

IMPORTS OF HONEY.

[6445.] Those of your readers who were interested by the tables of quantities and values of foreign honey imported into this country, given on page 395 of your volume for 1904, will be glad to have them brought up to date. I therefore send you the figures, hoping you may be able to print them now that the pressure on your pages caused by the show season is relaxing. You will not find them quite in the same form, as the Board of Trade Returns under the head of honey are not now made up in such detail. For comparison I again give the 1891 figures:—

	1904	1905	1891
France .....cwt.	1,326	1,240	1,216
United States, Atlantic	2,452	3,624	
,, ,, Pacific	1,711	531	8,118
Chile	2,928	5,358	5,099
Other Foreign Countries.....	1,723	1,564	6,878
	10,140	12,317	21,311
British West Indies .. ...cwt.	10,945	12,661	1,614
Other British Possessions ...	1,842	2,357	619
Total ...	22,927	27,335	23,544
Value	£29,127	34,763	
	25/4.8	25/5	per Cwt.

T. I. Weston.

Hook, Winchfield, Sept. 24.

THE SEASON IN DEVONSHIRE.

[6446.] I here give a brief account of the honey season in this part of the country. First, as regards the weather, the all-important factor in bee-keeping, I may say it has been not only remarkable but unique, so far as my memory serves, seeing that we have had an almost total absence of rain during nearly three months. Even when abundant and refreshing showers were reported near London and in the Midland Counties, here we had nothing more than a kind of mist, barely sufficient to even damp the dust of our roads. Thus, everything being dried up in this hilly part of Devon, and the income of nectar entirely stopped all supers were removed from the hives at the end of July, fully five weeks earlier than usual. Yet notwithstanding this drawback the honey crop has been fairly good owing to an unexpected flow of heather honey. One morning about the third week in August, after we had at last got some rain, I was startled by the loud hum of our bees on the wing. They went all in one direction, and as they came home heavily laden I could not help experiencing a feeling of anxiety lest their activity should be due to some unlooked for windfall, not generally to the advantage of the bee-keeper; as when some unwary one tries to extract his honey in the open air. Soon, however (although some days previously I had seen the heather-bloom half withered away) a sharp, yet pleasing smell, unknown to me for several seasons, came out of all the hives. It was really heather honey, which the bees had to travel more than a mile to reach. After a few days, seeing that the bees were clustering in great numbers in the porches I examined some hives and found them quite overfilled with honey. The side combs had to be removed at once and empty ones given instead. I do not know if this happened to other bee-keepers, but to me it seemed an extraordinary occurrence. From August 20 to the beginning of September we had genial summer weather, the thermometer registering in the shade 86 deg. Fahr. on August 31. Taught by the failure of the heather crop of the preceding years I had taken only four hives to the moors, and when I went to see them these stocks were also cramped for room. All the hives are now strong and well provided with winter stores, so I have every reason to be satisfied and to thank God for the past season, especially when I have had news from proficient bee-keepers in France to say they have not got a pound of surplus honey.—Br. Colomban, O.S.B., St. Mary's Abbey, Buckfast, Devon, September 29.

BEES IN NORTH BUCKS.

[6447.] Wasps are very numerous this year. I notice them very partial to ripe apples and completely clean them right out, leaving only the core and skin. I gathered one apple hollowed out in this

way full of wasps, and killed twenty-seven of them as they came out, or two at a time. It occurs to me that a few over-ripe or waste apples placed twenty yeards away from the hives would tend to attract the wasps, and thus leave our bees alone and afford a chance of destroying the pests. We have killed many hundreds on and in the apples this season.

Swarms.—I find my estimate of 50lb. of honey in a skep of bees mentioned on page 365 was too high. My neighbour tells me he had only 25lbs. of honey from it—yet it was a full-sized new skep. It certainly weighed over 50lbs. when taken up. But notwithstanding what Mr. Woodley and D. M. M., Banff, say, I still hold to my opinions respecting swarms in general. While on the subject of swarms I may mention an incident worth recording that happened in my own apiary on September 20, when my son came running to me saying, "There's a lot of bees in the hedge." On looking towards the place indicated the bees seemed to be almost all gone; but then on looking around I noticed a small swarm clustered on top of one hive and hanging down the back, some fluttering about over a surface of 10in. or so. On getting my smoker into use to try and find out if a queen was with them the bees clustered on my hat, but they seemed particularly good tempered. I could not find a queen or account for the incident in any way. They soon dispersed, but I could not find out which hive they came from.

Size of Drones.—I usually "take up" a number of skeps each year, and my experience is that drones in frame hives are fully as large as those in skeps, if not larger. The drone cells on combs in my frames measure four cells to 1in. or 9-32in. each. This, even on worker-foundation.

Fertile Workers.—Can anyone tell us how to distinguish these? I have never had one in my hives before this year. But several times, although I examined the combs I could not spot it. I judged by a number of eggs being seen in each cell, and drone-brood raised in worker cells. It was in a nucleus hive that I saw this.—A. H., Wavendon, North Bucks, Sept. 24.

HEREFORDSHIRE AS A BEE COUNTY.

[6448.] I am much obliged for your reply respecting my honey sample in last week's issue of "B.B.J." I can now, I think, clear up the matter as far as regards the source from which the honey was mainly collected by the bees. Close by my apiary there are a great number of "Sally" or "Sallow" trees, and during the months of May and June I noticed many bees working on the blooms. In fact during the early hours of the morning the trees seemed alive with them, but not so in the afternoon. I have looked up my bee-literature and find that "Sallow" is mentioned, and is good for honey and pollen. My own experience this season thus seems to be right, and that honey from that source is good, both as regards colour and quality.

Perhaps some brother bee-keepers will give their experience on the point. From my limited experience of Herefordshire it seems good for bee forage with its abundant fruit bloom, and of hawthorn edges white with blossom and plenty of white clover in the pastures. Bees are certainly kept in good numbers, but in going about from place to place I have seen very few frame hives, the major portion of stocks being housed in skeps. No doubt there are some up-to-date beekeepers among us, for I saw only a few days ago good honey in the window of a shop in Hereford very tastefully got up, with a prize card hung above it "2nd prize at the 'Royal' Show, Derby, 1906." It makes me ask if there is no bee-keepers' association for Herefordshire? I am told there is, but that very few bee-keepers are interested in it.—S. M., Bodenham, September 24.

SHOWS AND SHOWING.

[6449.] Now that most of our largest shows are over, may I be allowed to make one or two suggestions re the above? Your correspondents, "Worker" (6428, page 372) and "South Norwood" (6441, page 386), remark that when visiting the Confectioners' Show, and that of the Surrey B.K.A., held respectively at the Agricultural Hall and the Crystal Palace, London, they were disappointed to find exhibits guarded by officials and railed off from the public. I was an exhibitor at the Altrincham Show, Cheshire, on September 26, and was very pleased to see exhibits taken care of by an attendant. Personally, I am in favour of this guardianship, seeing that so many persons attend these shows who are inclined to become too inquisitive, often to the expense of the exhibitor. Further, I should like to suggest that bee-appliance manufacturers and persons directly interested in the sale of bee-goods be debarred from entering exhibits in the extracted honey section classes. While not wishing to adopt a dog-in-the-manger attitude, I think amateurs and beginners in bee-keeping would stand a much better chance of carrying off some of the prizes offered if my suggestion was adopted. It would be interesting to have the opinions of

brother bee-keepers expressed on the above.—Name sent for reference.—"SHOWING," Yorks, September 28.

A VISIT TO THE GROCERS' SHOW

[6450.] I feel it impossible for me to let pass the opportunity generally afforded to readers of the "B.B.J." of expressing my delight with the honey exhibition at the Agricultural Hall on September 26. It fell to my lot when at the exhibition to get into close conversation with a young man who appeared to be partly in charge of the honey stands, and he at once made me feel at home with him. For firstly he gave me a capital lesson on the merits of the "W.B.C." hive on exhibition, exhibited by the makers, Messrs. Lee and Son. Then he escorted me round the whole of the exhibits, pointing out to me the different varieties of honey, etc., also affording me a practicable lesson on showing honey in its best form. And before I had parted from him I felt that I had, as we Scotchmen say, "a bee in my bonnet." I was so delighted that I could not sleep for bees and honey staring me in the face. However, I was pleased with almost everything I saw on the honey stands, and very grateful for the instruction and courtesy I received from all round. Such pleasant ways of initiating one must tend to induce people to become members of a bee association, as I intend to be at an early date. I was also advised to get a copy of the "Guide Book," for which I enclose P.O. value and postage. I also thank you in anticipation of you inserting this in your JOURNAL, which I already receive weekly from my newsagent. I enclose card.—SCOTCHMAN, Rochester.

[Very pleased you enjoyed your visit to the show, and hope the favourable impression received will remain and grow stronger as experience is gained. The "Guide Book" has been sent, and we trust you will profit by its teaching, which, if carefully carried out, will keep you in the right track.—EDS.]

THE STANDARD FRAME.

SUGGESTED HARMLESS IMPROVEMENT.

[6451.] If this frame were $\frac{1}{4}$ inch less in depth it would enable bee-keepers to make their hives with less labour and expense. Commercially there are no 9-inch planed boards obtainable, the nearest is $8\frac{3}{4}$. The frame could be reduced $\frac{1}{4}$ inch to fit this commercial wood, and not be in anyway depreciated from any point of view. It is a simple matter, but it would save pounds to bee-keepers.—W. J. FARMER.

THEFTS OF HONEY AT THE MOORS.

[6452.] Several moor-going members of the Northumberlasd and Durham Bee-keepers' Association have this year had heather honey stolen while on the moors. The matter has been put into the hands of the police, but so far the perpetrator has not been discovered.

The custom here is to pay 1s. per hive for standage and looking after to the tenant of the moors, and I am being asked whether any legal liability rests on the tenant who has received his fee to make good any loss by theft from a hive while in his charge? I am therefore led to inquire. Can you assist us in this matter? I send name and sign—HON. SECRETARY, Stocksfield-on-Tyne, September 29.

[We have no personal knowledge of the legal liability attaching to caretakers.—EDS.]

CAPPINGS OF COMB.

By L. S. C., Ilkley, Yorks.

Tainted Honey (p. 351).—If it were thoroughly realised how easily honey may be tainted more use would be made of the escape-board and less of the smoker and carbolic cloth. I have heard of honey so tainted by a tarred hive as to be uneatable! Honey is essentially a delicacy, and should be treated delicately.

Driven Bees Dying in Winter (p. 352).—This is often due to the new combs being filled with syrup. These are cold comfort, and if I were unable to give the bees clustering room below their stores I would space such combs double distance, or alternate them with frames containing only starters of foundation, so that the bees might really cluster.

Swarms on Starters (p. 352).—In place of reducing the number of frames I would prefer to hive upon a full set of shallow frames with starters. With the standard frame, combs built in this way are often completed with drone comb in the corners, even although well enough begun. Again brood combs should be wired, and when built from starters naturally over the wires, they are often faulty. Everything must be just right to obtain perfect combs in this way. It is all right where the bees are strong enough or where wax is wanted, but otherwise a set of shallow combs will be completed better, and may be permanent. With the shallow set the bees are spread under the whole area of the super. If drone-comb be built it will usually be at the outside, and will generally contain honey at first, and may be used for extracting purposes. The worker-combs will contain brood, and practically the whole of the honey will go above.

Of course this necessitates another manipulation or two, but my own system involves the use at times of a set of shallow brood-frames in addition to the regular standard set.

"*Casts*" *Building Worker Comb* (p. 353).—It is, I believe, Doolittle who maintains that, with a virgin queen, drone-comb is built so invariably that combs in process will show whether the stock has been dequeened. I do not know exactly upon what observations this is based for I find that such bees build worker-comb, but there may be conditions other than the mere possession of a virgin queen which would overrule the matter.

Hiving Driven Bees (p. 354).—I prefer to hive them in the old-fashioned way, through the entrance, and to observe the condition of the bees and queen, but it is certainly quicker at times to hive the bees in a space at the side of the frames, and better, if the operation happens to be done late in the day at this time of the year. If the bees are hived on the top of the frames it is quite a mistake to attempt to drive them down with a carbolic cloth.

Doubling Hives (p. 355). — Would "Amateur" kindly explain more fully how he obtains an "early rack of sections" by this method?

Editorial Encouragement (p. 355).—The editorial on p. 361 does not read like discouragement of provincial or any other exhibitors. But the matter does not rest with the editors, and those who are determined to get prizes will get them, whatever the encouragement.

Wintering Bees in Skeps (p. 364).—In this cold and bleak district at best cottagers do not make a success of frame-hives. They maintain with truth that the bees winter better in the skeps. "Avondale" (p. 365) seems to have had a warm time with that bad tempered stock. It sounds as though there would be a heavy wastage of bee-life every time they hive were examined. It makes me wonder if it would have been possible to wring the poison out of his coat under the mangle!

Eight Mile Strain (p. 365).—High-flown description this! Is this a "strain" of the imagination? Whose is this strain of "long distance fliers?" It sounds as though they had been accidentally crossed with homing pigeons!

Drone-Like Queen (p. 366).—Has this freak been lost? I should much like to have seen it. I would willingly purchase abnormalities of this kind rather than they should be lost to us.

Wax Moth (p. 366).—I hope that no beginner will, in ignorance, adopt Hoffman frames to prevent wax moth. In addition to some other objections there is too much wood for our size of comb, and there are plenty of other frames obtainable without the saw cut.

Bee Paralysis (p. 366).—This sounds more like a case of dysentery due to fermented honey. But I am inclined to the view that paralysis is also an enteric disease, and I have just received an interesting letter from Mr. Cooper of the Isle of Wight, which tends to confirm this view.

Irascibility (p. 371).—With the heather flow over and stores mostly sealed, uniting is a touchy job, and much simplified if some syrup be poured over the frames a few minutes prior to operating.

Scent Infuriating (p. 372).—It may be that there was some special odour about the person to induce the first unwarranted attack, and this may have been the continuing cause, but bees would seem to sting in the same place almost as readily as they will swarm upon the same bough. Of course it must be scent, but it looks very much like force of example!

Over One Million Insects (p. 372).—If "D. M. M." had given us the exact number of his hive defenders it would hardly have been possible to have contradicted him. What an army of amazons! And yet how much less to be dreaded than a similar number of—say—fleas!

Queries and Replies.

[3412.] *Bees and Foreign Queens.*—I should like your advice on the following point:—Two weeks ago I requeened a stock of English bees with an Italian queen, and now have a nice lot of brood in various stages. To-day, however, I discovered a queen cell sealed over, and another started with Royal jelly at bottom of the cell. This induces me to ask (1) is not this a very unusual proceeding, and at this time of year? The queen is still in the hive—in fact, I saw her to-day, and she is still laying, because there were plenty of eggs about. The bees had also built out about 2in. square of drone comb, some of the cells in which contained grubs. I should explain that the stock was transferred from a skep to the frame-hive rather late in the summer— too late, at least, for the bees to collect a full winter's supply, so that I have been of late giving back to the bees the honey extracted from the skep—diluted with an equal volume of water—at the rate of about 1½ pints twice a week. Do you think that the bees imagine that spring is at hand, from their getting so much honey at this season? (2) Ought I to do anything besides cut out queen cells, if any more should be started? (3) I suppose I ought to cut out the drone-comb, too, when it is sealed over?—H. Emmons, Southampton, September 24.

Reply.—(1) Very unusual, but we have known of the same thing occurring before when a foreign queen has been introduced to

a native stock in autumn. We should not allow the sealed queen cell to hatch out, but remove it along with the second one started. (2) We don't see the need for doing anything beyond what you have mentioned. (3) Yes, by all means remove the drone-brood when sealed.

[3413.] *A Beginner's Queries on Hibernation.*—I venture to send a few queries, and will be glad to have replies thereto in your most instructive paper, the "B.B.J.": 1. What happens to bees in the winter? 2. If they hibernate, what is exactly the process, and during which months do they hibernate? 3. Do the bees eat at all while hibernating? Any information upon the winter state of bees would be most interesting and instructive to a Midland Counties "Beginner," Burton-on-Trent, September 23.

REPLY.—We print above queries in order to show how needful it is for beginners to provide themselves at the very outset with a reliable text-book on bees and bee-keeping before they can hope to succeed or even to make satisfactory progress. This is the first item of advice we offer. For the rest, we may briefly reply: 1 and 2. Bees do not hibernate in the fullest sense of the term—*i.e.*, they cannot live without food in winter as some insects do. Their hibernation goes no further than remaining clustered in a lethargic state for mutual warmth, but requiring food all the time. In fact, the whole colony would perish if entirely foodless for a week or so. 3. Above reply answers this query.

[3414.] *Bees Entering Houses in Autumn.*—What is the reason of bees invading a room? For three successive days the dining-room at the Vicarage was invaded to such an extent that the family had to clear out. I could see no trace of a queen, and the bees wearied themselves in trying to get out till they were swept up in a shovel and cast out! There are no hives at the Vicarage, and none within 100 yards. It is a mystery to me. I send name, etc., and sign "Silver How," York, September 24.

REPLY.—There must, we think, have been some attraction to draw bees to the house when the incident related above took place. Maybe there was something going on in the domestic offices of the Vicarage—preserving or sugar-boiling of some kind. If this was so, and the servant had closed the window on observing bees coming, we could understand the little foragers—on pilfering bent—making their way inside the house by any open window they could find. Some explanation of this kind is the only one we can give from a distance.

[3415.] *Swarms Deserting Hive for House Roof.*—A swarm of bees left their hive in the garden of an old house in this neighbourhood and entered a small hole in the wall near the roof of the house mentioned. The walls are of uncommon construction—*i.e.*, stucco outside, of considerable thickness, and having an interspace of some inches between the inner and outer shell, which makes it practically impossible to see where the swarm has attached itself; and as the bees enter immediately above a much used door, although high up near the roof, I therefore ask: Do you think it likely that they may in time become troublesome; and, if so, what is the best way of getting rid of them? Would it be advisable to extemporise a bee escape over the hole? Your reply will oblige. —A. DICKINSON, Leamington, September 24.

REPLY.—We do not think there need be any fear of the bees becoming troublesome if left undisturbed. They evidently enter too far above the doorway to cause annoyance. Besides, it is a well-known fact that bees have been in possession of similar places undisturbed for years. It is only when a large amount of honey has been stored and the occupants of the houses are anxious to appropriate the hidden treasure that trouble comes in.

[3416.] *Contracting Hives for Winter.*—I have taken two frames of honey from brood-nest from my hive in order to contract it to eight frames for winter. One of the combs has a little unsealed honey, otherwise there is about 3¾lb. sealed in each, and I now ask: 1. What would you advise me to do with them, as I have only the one hive? Or 2. Do you think it is advisable to take them out at all? Of course, I shall feed the bees now, and so ask, when is the best time of day to feed?—R. HOWLAND, Kent.

REPLY.—1. It is not absolutely necessary to contract hives at all for wintering, although it is advantageous to have all combs covered by bees, as they winter better in that condition. In your case, however, we should much prefer to leave the combs of natural food now in the hive rather than have to feed the bees with sugar syrup to replace the stores taken away in order to fulfil the first-named condition. Our advice, therefore, is, leave the combs where they now are, and thus save expense, worry, and risk. Your second query is answered by above reply.

[3417.] *Dealing With Heather Honey.*—Will you kindly say what is the source of the enclosed honey? It will not extract, and some of it resembles strong jelly in consistency. We have both "ling" and bell-heather on a heath about two miles away, but it is said by bee-keepers who have sent hives there not to yield heather honey. The bees do not clean up the combs when placed on after extracting, but will do so if exposed (at the risk of starting thieving) several yards from the hives. The season has been a fair one. My own average from five hives is 40 a hive, mainly sections. Awaiting your reply, and thanking you in anticipation.—R. P., North Shropshire, Sept. 25.

REPLY.—Your sample is a good heather honey, though not entirely from the "ling." We cannot understand your "extracting" honey of that class. It should be all stored in sections, built from "starters" only, so that the comb could be eaten (wax and all) after the capping has been removed without any inconvenience. This is the way all "ling" honey should be stored for table use, and it brings the highest price if so prepared for

market. Good heather honey must be removed from the comb by means of a honey-press; it will not extract. —

[3418.] *Minute Insects in Comb Capping.*—Looking through a stock of bees recently I noticed that the capping on the honey was rather peculiar. Never having seen anything like it before, I had a closer look into it, and it appeared to me like a lot of tunnels under the capping, and I at once thought of the articles written in the BEE JOURNAL on the subject last summer. I am sending you on a piece of comb as it came from the hive. If it is of any interest to beekeepers, and you think Mr. Sladen would like to have a piece sent him, I shall be very pleased to forward him a sample, unless you send the enclosed specimen to him. Every comb in the hive is like it more or less. The stock was a swarm this summer. I also notice on some of the bees Braula cœca. I only came here from Kent fourteen days ago, so I cannot give you more particulars of it than the above. Any comments you have to make on it can be put in the "B.B.J," and signed, J. E. SHORT.—

P.S.—Some parts of the combs are netted like a spider's web.

REPLY.—The bit of comb sent was so crushed in packing that it was almost impossible to judge of the mischief complained of. If you will send another piece, properly packed, we will ascertain definitely what the trouble is. In the former cases referred to, the tunnelling was not under the capping, but in the capping itself.

PRESS CUTTINGS.

CURIOUS SWARMING INCIDENT AT CARDIFF.

Mr. F. Williams, Cathays Coal Supply, Gwennyth Street, Cardiff, writes:—Yesterday (Tuesday) morning I sent one of my carts out with a load of coal in baskets, and after delivering the coal at different places the cart returned home at noon with the empty baskets. J. Smart, the haulier, took the horse out of the cart into the stable, and then I noticed a lot of bees flying about the cart, and on inspection I found a swarm of bees in one of the baskets. I sent for Mr. Cable, 21, Malefant Street, and he got them all into a hive. This seems very strange. How did the bees get into the basket on the road without the haulier knowing anything at all about it? He was quite surprised when I pointed the matter out to him.—*South Wales Daily News.*

BEES AND BOARDS OF GUARDIANS.

Bee-keeping is a profitable and an instructive hobby, and one would have thought that an apiary was a most desirable adjunct to a workhouse. The bee, as everyone knows, affords one of the best examples of industry and of social and domestic economy to be found in nature, and the moral lessons which it inculcates ought to be of the greatest benefit to the inmates of the workhouse. But bee-keeping does not appeal to the Grantham Board of Guardians, who have ordered their workhouse master to give up this hobby because they are afraid some of the inmates might have the misfortune to get stung. Bees are not in the habit of stinging people unless they are molested, but if the guardians are so solicitous regarding the inmates of their workhouse, it is to be hoped they will also abolish pins and needles, knives, forks, fires, and boiling water.—*Birmingham Daily Mail.*

INTERESTING EXTRACTS.

EXTRACT FROM LIFE OF SIR RICHARD BURTON.

"He travels and expatriates; as the bee
From flower to flower, so he from land to land;
The manners, customs, policy of all
Pay contributions to the store he gleans;
He seeks intelligence from every clime,
And spreads the honey of his deep research
At his return—a rich repast for me!"
The careful insect 'midst his works I view,
Now from the flowers exhaust the fragrant dew;
With golden treasures load his little thighs,
And steer his distant journey through the skies.
Some, against hostile drones the hive defend,
Others with sweets the waxen cells distend;
Each in the toil his destined office bears.
And in the little bulk a mighty soul appears. GAY.

Bee Shows to Come.

A nominal charge of 2s. 6d. is made for notices (not exceeding 7 lines) in this column, 10 lines charged 3s. 6d.; up to 15 lines 5s., which covers cost of insertion from order till date of show. Cash should accompany orders for insertion.

October 9 to 12, at the Agricultural Hall, London.—Show of Honey and Bee Produce in connection with the British Dairy Farmers' Association. Numerous and liberal prizes for honey, etc., including the valuable Silver Challenge Cup of the B.B.K.A. **Entries closed.**

October 18 to 21, at Waverley Market, Edinburgh. — Honey show in connection with the Tenth Annual Edinburgh and Midlothian Industrial Exhibition. All open classes. Beautifully illustrated prospectus, price 2d., from A. Hutchinson, 15, Leith Street, Edinburgh. **Entries closed.**

October 18 and 19, at Kilmarnock, N.B.—Honey Show in connection with the annual exhibition of the Ayrshire Agricultural Society. Schedules on application to John Howie, Secretary, 58, Alloway Street, Ayr. **Entries close October 5.**

November 9 and 10, at Chorley, Lancs.—Honey Show of Lancs. B.K.A. in connection with

Chorley Chrysanthemum Society's Annual Show. Four Open Classes. Exhibitors allowed to bring honey for sale. Schedules from W. G. Smith, Town Hall Auction Rooms, Chorley, Lancs. **Entries close November 3.**

Notices to Correspondents & Inquirers.

Letters or queries asking for addresses of manufacturers or correspondents, or where appliances can be purchased, or replies giving such information, can only be inserted as advertisements. The space devoted to letters, queries, and replies is meant for the general good of bee-keepers, and not for advertisements. We wish our correspondents to bear in mind that, as it is necessary for us to go to press in advance of the date of issue, queries cannot always be replied to in the issue immediately following the receipt of their communications.

F. P. Cheesman (Kent).—Bee Parasites.—1. The insect you mention is the Braula cœca, or blind louse. It is fully described and illustrated in the "Guide Book." 2. It will not spread to your other hives unless the combs are interchanged. To rid bees of the parasite tobacco smoke is effective, causing it to drop from the bees to floorboard, when it may be brushed off, and cannot re-enter the hives.

"Disappointed" (St. Austell).—Awards at London Shows.—Your suggestion would no doubt be helpful to expectant exhibitors, but a little reflection will, we think, convince you of its impracticability. It is obvious that no one but the judges themselves could furnish the particulars asked for; and to require those long-suffering gentlemen to take on this additional task to duties already onerous enough would be unreasonable in the highest degree. Moreover, we may remind all exhibitors of a simple fact they seem apt to overlook, viz., it needs but to enclose an addressed halfpenny postcard in the package containing the exhibit (with number thereon), when the awards will be forwarded by first post after they appear.

G. C. F. (Stoke-on-Trent).—Prepaid Advertisements.—We cannot fix the "market value" on any goods advertised in our pages. The prepaid column is used by advertisers whose goods we never see; but, even if seen, it is not for us to fix prices. Readers, as a rule, regard the prepaid column as one of the most useful and interesting features of the paper's contents, and thousands of pounds change hands through its medium every year. In fact, it is not too much to say that no bee paper that can be named here, or the world over, is made one-half the same use of as the British Bee Journal. We do not use the "please mention this Journal" foot-note to advertisements, preferring to let their numbers speak for themselves.

Suspected Combs.

Doubtful (Yorks).—There is no disease in comb sent. The queen is evidently old and worn out—in fact, is a drone-breeder. The comb shows this by worker-cells being occupied with drone-brood only.

Sir H. Stewart (Ramelton, Ireland).—The frame of comb sent is, we think, affected with the disease known as "black brood." In fact, the dead larvæ in a dozen or more of the sealed cells have been carefully removed, and will be shown (in proper phials, of course) at the coming conversazione of the B.B.K.A. next week. The dead larvæ in your sample is in a much earlier stage of development than the other specimens we have preserved for the same occasion, and will thus be helpful in showing the gradual effect of disease on the dead larvæ. We hope our senior editor will have something to say on your specimens, as it is hoped that Mr. Cowan will introduce the subject on the 11th inst. at Jermyn Street.

M. J. (Hailsham).—The two tiny bits of comb sent are not suitable as a means of diagnosing foul brood—one sealed cell only in each, and that containing a dead larva that might have died from chill only. There is no sign of F.B. in either of the cells.

Honey Samples.

Enquirer (Sheffield).—Of samples sent, No. 1 is good in colour and of very fair flavour, but it has an unusual "tack" that would probably spoil its chance in a keen competition. No. 2 would do very well in a class where heather flavour is allowable, its deep golden colour being a good point. It is, in fact, a good sample of "heather-blend" honey. No. 3 is mainly heather, from *E. cinerea*, but thin and rank in flavour.

W. B. B. (Evercreech).—Sample has been taken from hive before the honey was fully ripe; the flavour is not at all bad, and would sell well when granulated, unless fermentation set in. It is thin at present.

D. Cole (Hertingfordbury).—The glass jar reached us smashed in post through insecure packing. From the slight evidences left in parcel we think it would be a very good honey; thick, clear, and, we think, entirely from white clover.

W. Norris (Bradford-on-Avon).—We regret miscarriage of your letter. The sample was excellent on all points, but too light in colour for the medium class at the show in question.

J. P. (Bolton-le-Moor). — We think your honey is likely to be a blend from ragwort (ragweed) and heather. It is very thick and of fair colour, but the flavour is coarse and rank, probably got from the ragweed.

S. S. Haywood (Brighouse). — Both your samples are heather honey contaminated with honey dew, No. 1 being very thin, and of coarse flavour and dark, and, in consequence, not good for marketing purposes. No. 2 is better than No. 1 both in colour and flavour, but in each case the colour and consistency marks it as from *E. cinerea*, or bell heather. It is quite fit for sale to persons who care for strong, rank-flavoured honey.

B. Alcock (Dundee).—1. Yours is a very good sample indeed of a clover and heather blend honey of the best kind. The

heather source is the true ling, *Calluna vulgaris*. 2. It is a capital honey for market. 3. Those who buy good heather honey never expect it to be without air bubbles after pressing. The bubbles cannot be got rid of.

F. G. F. (Twickenham).—Both samples are spoilt by honey dew. The race or strain of bees which gathered it can have no effect, good or bad, on the honey stored. No. 1 will only bring a low price on the market. No. 2 is better, being very thick and strong-flavoured, and will not please most palates.

T. STEIR (Mitcham).—A fairly good sample of medium-coloured honey. It is a bit damaged by a strong flavour, not very palatable, but it will make a good table honey when granulated and solid.

B. WITHER (Dunmow).—Your three samples, numbered 1, 2, and 3 respectively, judge themselves by colour only as accurately as when tasted. No. 2, pale-golden in colour, is by far the best, being very good on all points. No. 3 is darker than No. 2, and several points inferior all round; while No. 1, darkest of all, is very much inferior to either of the others.

DOUBTFUL (Sheffield.—Sample is largely mixed with honey dew. It is very thick, as if from leaves of trees. The flavour is so poor as to make it unsuitable for marketing.

*** *Some Queries and Replies, &c., are unavoidably held over till next week.*

Special Prepaid Advertisements

Twelve words and under Sixpence: for every additional Three words or under, One Penny.

ATTENTION is called to the special offer of "BRITISH GOLDEN" Etc., Queens in Mr. Sladen's advertisement this week. T 70

FINEST 1906 EXTRACTED HONEY, 28 lb. tin, 14s.; tins free. Sample, 2d.—R. M. BROWN, Holly Street, Luton. T 63

SELL or Exchange four stocks in frame hives, well-fed, healthy, also other appliances, £3; or good 12-bore breech loading gun; owner going abroad.—MACPHEE, Station, Thornton, Fifeshire. T 57

DRIVEN BEES for Sale, 3s. 6d. per lot, guaranteed free from disease, on rail free; pure Extracted Honey, 53s. per cwt.—DENNETT'S GREAT APIARIES, Whitchurch, Hants. T 25

HEALTHY DRIVEN BEES, 1s. 2d. lb., boxes 6d., returnable; grand young Heather Queens (fertile), in introducing cages, 2s. 6d.—HOOD, Marine Café, Whitby (late of White Heather Apiary, Pickering).

GOOD HONEY, 28 lb tins, 6d. lb. — GEORGE THOMPSON, "Beecroft," Helpringham, Lincolnshire. S 12

OFFER wanted for good CAMBRIDGE RUN HONEY.—SEAMARK, Cycle Manufacturer, Willingham, Cambridge. T 68

FOR Sale, 16 DOZEN SECTIONS of HONEY, first quality, 7s. dozen. F. COUSINS, Misterton, Gainsboro'. T 64

FOR Sale, ONE STOCK of BEES, in standard frame hive, well provisioned for winter, healthy, £1.—URSELL, Oxford Street, Newbury. T 62

FOR Sale, SIX STOCKS, in good hives; expert's report good; also two skeps, with 1905 and 1906 swarms; selling owing to ill-health; seen by appointment.—GADSBY, Ivydene, Hutton Road, Shenfield, Essex. T 61

HEATHER HONEY for Sale, 7d. per lb.—WRIGHT, 71, Westgate, Pickering, Yorkshire. T 60

HEALTHY DRIVEN BEES, with 1906 Queen, 4s. per lot; none under 4 lbs. sent out; packed free.—HARRISON, Bee Farm, Middleton, Pickering. T 59

FOR Sale, an EXTRACTOR and few hives, cheap.—BURROWS, Plaistow, Bromley, Kent. T 58

DRIVEN BEES for Sale, 2s. 6d. per stock.—WADEY, Broadstone, Dorset. T 50

FINEST WHITE CLOVER HONEY, in 28 lb. tins.—H. BROUGHTON, Barrow, Hull. T 51

1½ CWT. of GOOD HONEY, 56s. per cwt.; also 100 Sections, slightly granulated, 6s. 6d. per dozen.—CUCKSEY, Mildenhall Road, via Soham. T 56

SIX DOZEN SANFOIN SECTIONS, well filled, 7s. 9d. per dozen, carriage paid; also 28 lb. tin Sanfoin Honey, 6½d. lb.—NORTH, Poplar Hall, Cressing, Braintree, Essex. T 55

BEES.—Stocks on eight frames. Black English 1906 Queens, guaranteed healthy and perfect condition, safe delivery; skeps from 12s. 6d.; ample stores; honey, light, extracted, liquid, or granulated, screw jars, 8s. 6d. dozen, £5 gross, 53s. cwt.—CHARTER, Tattingstone, Ipswich.

EXPERIENCED Bee Expert wants Situation as Handyman; gardening (no glass), poultry, frame hive, etc., making.—W. PALMER, 174, Curzon Street, Netherfield, Nottingham. T 53

FOR Sale, EXTRACTED HONEY, 54s. per cwt.—MYLAND, Stanley Terrace, Basingstoke. T 69

TWO DOZEN 1 lb. JARS (full pound size) HONEY, good colour and flavour, carriage paid per Carter Paterson for 18s.—MARTIN, Model Apiary, Orpington, Kent. T 65

QUEEN HUMBLE BEES FOR NEW ZEALAND.—A large number of these having already been received, no more are wanted for the present.—F. W. L. SLADEN, Ripple Court Apiary, near Dover.

1 CWT. of FINE EXTRACTED ENGLISH HONEY, 48s.; new Cowan Extractor, 35s.—AVERY, Deverell, Warminster. T 67

SALE or Exchange for Bee appliances, collie pups (good working strain). Particulars, stamp.—MOSELEY BANK APIARY, Hallow, Worcester. T 52

QUEENS; pure imported 1906 Carniolians, very prolific and exceedingly good-tempered, 6s. each, post free; imported Italian, 5s. 6d., post free.—PIDDUCK, Cheshire Association Expert, Sunnyside Apiary, Alsager, Cheshire. T 66

WANTED TO PURCHASE: Heather Sections, delivered in good condition to Manchester; Heather Run Honey, delivered to Lavington Station (G.W.R.), with pure Beeswax. Any quantities delivered, Lavington Station. In making offers send samples Run Honey and Beeswax.—GORDON ROWE, Honey and Beeswax Merchant, Market Lavington, Wilts.

1906 GRANULATED LIGHT HONEY, pound screw-cap glass jars, 8s. 6d. dozen; yellow crocus, snowdrops, 1s. 100; daffodils, white narcissus, 1s. 6d. 100, 2½d. dozen; mixed narcissus, daffodils, 1s. 100, 2d. dozen; hyacinths, 1s. 6d. dozen; Chapman honey plant, 3d. packet, post free.—WEST, 83, Stoke Road, Gosport. T 41

APIARY, with connection, 14 bar-framed hives, double walls, cork packed, strong, healthy stocks, average yield 75-20 lb. each, complete outfit.—FLUDDER, Stoke-by-Mayland, Colchester. T 48

HEALTHY DRIVEN BEES, with Queen, in 4 lb. or more lots, at 1s. 3d. per lb.; boxes returnable, or will be charged or.—R. BROWN, Flora Apiary, Somersham, Hunts. S 47

Editorial, Notices, &c.

QUALIFYING FOR BEE EXPERT

The following letter from a would-be qualified expert of the British Bee-Keepers' Association is dealt with here, as securing for it more prominence than the writer intended, first, because the subject is in itself an important one, and affects all who are desirous of becoming experts in bee-keeping; and secondly, because it affords us the opportunity of making plain some points that need clearing up in order to avoid future disappointments.

Our correspondent says:—"I am desirous of studying bees and bee-keeping with the idea of becoming a qualified expert, and in view of this I ask if you would kindly tell me through your valuable paper (the B.B.J.) the proper way to go about it, and what books would be required, also where the latter are obtainable? It may be well to say that I am already a bee-keeper, having a small apiary of six hives. Thanking you in advance, and wishing your paper every success (which it deserves), I beg to sign myself, 'QUEEN BEE,' Colne, Lancs., October 6."

With regard, then, to our correspondent's query, the initial step is to write to Mr. E. H. Young, Secretary British Bee Keepers' Association, 12, Hanover-square, London, for the syllabus required. The latter document, in addition to other information, states what books are recommended as being necessary, and any bookseller will procure them (or they may be obtained from this office). Practically, however, the only books absolutely necessary for the third-class examination are the "British Bee-Keepers' Guide-Book," by T. W. Cowan, and "The Honey Bee," by the same author. It is hopeless for a candidate to expect to pass without being so well acquainted with the subject as to be able to answer correctly certain questions which the B.B.K.A. deem essential before a certificate of efficiency can be awarded.

Only those who have officiated as examiners, together with candidates who have gone through the ordeal, can fully realise the situation when an aspirant who finds himself totally unprepared to answer the questions put to him, through having no idea beforehand of the nature of the examination he was to undergo. Quite recently a candidate informed us that he "had never read the 'Guide Book,' or any of the books recommended by the B.B.K.A." Another, when unable to answer questions, said it was years since he had troubled to read a text-book, and he had forgotten many details about which he was asked. Such incidents as these are all too frequent, and we feel sure our own experience is not exceptional. Of course, there generally follows the natural regret that some definite idea of what the examination comprises is not supplied beforehand to candidates by the county association to which they belong.

If the above remarks help to dispel the uncertainty now existing on the points at issue, and if would-be experts will take the trouble to read up the subject before presenting themselves for examination, it will be found much more satisfactory both to examiners and to those who desire to secure the coveted certificate.

CHESHIRE AGRICULTURAL SOCIETY

SHOW AT CHESTER.

The annual show of the Cheshire Agricultural Society was held on the Roodee, Chester, on August 29; the honey section being under the management of the Cheshire B.K.A. The Rev. T. J. Evans, Rock Ferry, and Mr. T. D. Schofield, Alderley Edge, officiated as judges, and have favoured us with their report on the bee and honey exhibits, which (somewhat abridged) we print at foot. Their awards were as follows:—

Complete Frame-Hive for General Use.—1st, Mrs. W. Cartwright, Moore, near Warrington; 2nd and 3rd, George Rose, Liverpool; r., W. Shepherd, Higher Broughton, Manchester.

Twelve 1-lb. Sections.—1st, Abraham Hamer, Llandilo; 2nd, J. Pearman, Derby; 3rd, William Reece, Tarporley.

Twelve 1-lb. Jars Extracted Honey.—1st, John Berry, Llanwrst, Wales; 2nd, A. S. Dell, Leigh, Lancs.; 3rd, Hugh Berry, Llanwrst, Wales.

Observatory Hive with Bees and Queen.—1st, Herbert Potts, Dutton. (No other prize awarded.)

Six 1-lb. Sections.—1st and Silver Medal, William Kelly, Sandycroft, Chester; 2nd, William Ratcliffe, Barthomley; 3rd, Fred C. Kelly, Hawarden.

Twelve 1-lb. Sections Extracted Light-Coloured Honey.—1st and Bronze Medal, E. Maxwell, Malpas; 2nd, B. Thomas, Market Drayton; 3rd, J. Griffiths, Tarporley.

Twelve 1-lb. Sections Extracted Medium-Coloured Honey.—1st, Thomas Brocklebank, Heswall; 2nd, S. Gerrard, Heswall; 3rd, Mrs. R. Taylor, Rossett.

Six 1-lb. Sections Extracted Honey.—1st, Mrs. Nickson, Malpas; 2nd, George Lambert, Northwich; 3rd, Fred C. Kelly.

Six 1-lb. Sections Extracted Honey.—1st, Walter Johnson, Chester; 2nd, J. Griffiths, Tarporley; 3rd, Charles Brookfield, Chester.

Two Shallow-Frames of Comb Honey.—1st, Fred C. Kelly; 2nd, E. Maxwell, Malpas; 3rd, H. B. Eaton, Sandbach.

Exhibit of not less than 1-lb. of Wax.—1st, Job Astbury, Kelsall, Chester; 2nd, William Ratcliffe; 3rd, George Lambert, Northwich.

The Baroness Burdett-Coutts' Prize Hive.—William Ratcliffe.

JUDGES' REPORT (ABRIDGED).

The entries were not as numerous as last year, and there was a good deal of dark honey exhibited, owing to the poor quality gathered this season in Cheshire, except in a few favoured districts.

There were only six entries in the class for twelve 1-lb. sections of comb honey, the first prize going to an exhibit of beautiful sections. It seems a pity more entries cannot be obtained for this attractive-looking class, and we would suggest increased value in prizes, and more extensive advertising among section-producers.

Some very good honey was shown in the open class for twelve 1-lb. jars of extracted honey, a fine sample from Wales, good on all points, taking first; whilst the second and third prizes went to very good exhibits.

Some nice tall sections came to the fore in the class for six 1-lb. sections, but the lace edging came dangerously near the maximum allowance.

In the class for twelve 1-lb. jars of extracted light honey many absentees were apparent. Only three exhibits could be classed as good, the rest were poor flavoured, or unripe honey.

For twelve 1-lb. jars extracted medium-coloured honey, the first and second prizes went to delicious blends of heather and clover. The rest were samples of ordinary quality, and one sample was disqualified as too light in colour.

The class for two shallow-frames of comb-honey is growing in favour, some very fine combs being staged.

In the class for not less than 1-lb. of wax, we have seldom, if ever seen a finer lot of wax exhibited. The prizes went to carefully prepared samples of beautiful wax, which well deserved their awards.

There were two classes for six 1-lb. jars extracted honey, but though the entries were numerous, the exhibits were poor in quality owing to the bad season.

The class for complete frame-hive for general use brought eight entries, and is always an interesting class for bee-keepers. The awards went to hives of the "W. B. C." pattern, which still holds the field as a most practical hive. Unfortunately the makers of the hives staged do not adhere to the original pattern, as designed by "W. B. C." Only one of the prize hives had movable legs, and the porch and floor-boards were not flush with the sides. We would suggest a closer following of the original specification.

The final class was for observatory hive with bees and queen. We do not like to see bees confined to the hive in an oppressively hot tent, and it would be better to do away with this class unless arrangements were made for the bees to fly. The first prize had to be withheld from the best hive owing to the combs not being visible on both sides. The exhibits were well staged, and the stewards are to be complimented on their management.

SHOW AT CASTLE DOUGLAS.

The show of dairy produce, honey, etc., was held at Castle Douglas on Thursday, September 13. The honey section in connection with above being under the auspices of the South of Scotland Bee-keepers' Association, was again a decided success. The number of entries (about 100) was a good average. English exhibitors were not so numerous this year as formerly, and those who did forward exhibits were not fortunate enough to get amongst the prize-winners.

OPEN CLASSES.

Three 1-lb. Jars Extracted Honey.—1st, Q. Aird, Dalbeattie; 2nd and 4th, J. M. Stewart, Mollance Gardens; 3rd and v.h.c., James Kerr, Dumfries; h.l., T. Drysdale, Clarebrand; c., R. Slater, Hardgate.

Three 1-lb. Sections.—1st, R. Slater; 2nd, Q. Aird; 3rd, John M'Donald, Dumfries; v.h.c., James Johnstone, Maxwelltown.

Single 1-lb. Jar Extracted Honey.—1st and 2nd, Q. Aird; 3rd, R. Slater; 4th and c., J. Johnstone; v.h.c., J. M. Stewart; h.c., James Kerr.

Single 1-lb. Section.—1st, Q. Aird; 2nd, James M'Leod, Haugh-of-Urr; 3rd, R. Slater; 4th, James Kerr; v.h.c., J. M'Donald.

Beeswax.—1st and 3rd, Q. Aird; 2nd, J. M. Stewart.

CONFINED TO MEMBERS.

Super of Honey (any weight).—1st, P. Dalziel, Haugh-of-Urr; 2nd, J. M'Leod; 3rd, Q. Aird.

Six 1-lb. Jars Extracted Honey.—1st, Q. Aird; 2nd, J. M. Stewart; 3rd, R. Slater; 4th, T. Drysdale.

Two 1-lb. Sections. 1st, Q. Aird; 2nd and 3rd, John M'Donald; 4th, James Johnstone; v.h.c., Mrs. Wm. Smith, Twynholm.

Six 1-lb. Sections.—1st, R. Slater; 2nd, Q. Aird; 3rd, John M'Donald.

Three 1-lb. Heather Sections.—1st, James M'Leod; 2nd, Q. Aird.

Three 1-lb. Jars Extracted Heather Honey.—1st, James Johnstone; 2nd, Q. Aird.

Super of Heather Honey.—1st, Q. Aird.

DAIRYMEN ONLY.

Three 1-lb. Jars Extracted Honey.—1st, James Lamberton, Sandbed, Dumfries; 2nd and 3rd, Mrs. Smith.

HONEY IMPORTS.

The value of honey imported into the United Kingdom during the month of September, 1906, was £1,112.—From a return furnished to the BRITISH BEE JOURNAL by the Statistical Office, H.M. Customs.

Correspondence.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

**** In order to facilitate reference, Correspondents, when speaking of any letter or query previously inserted, will oblige by mentioning the number of the letter as well as the page on which it appears.*

NOTES BY THE WAY.

SELLING THE CROP.

[6453.] With the incoming of October we turn our attention from outside work in the apiary to the honey-room and the marketing of our crop. Should it be comb-honey requiring to be got ready for sale, see that every particle of brace comb and propolis is scraped off every section, and if the number of sections to be dealt with is large, carefully grade them into first and second quality, and those not so well filled or less transparent, along with those in which are seen a few unsealed cells, into third. Those of pale primrose colour, well filled and nearly transparent when held up to the light, are the quality which I call No. 1, and when glazed or cased with glass both sides they will bring you 1s. each retail, or 10s. per dozen delivered to the tradesman for retailing. No. 2 are equally well filled as No. 1, though not so transparent; these will bring 8s. 6d. or 9s. per dozen, according to the market and extent of order. Customers taking two or three gross for cash on delivery will naturally expect to buy a little cheaper than when only two or three dozen are taken. No. 3 quality will sell at 7s. or 7s. 6d. per dozen. Those not filled well enough for market should have the honey extracted and the combs given back to the bees to be cleaned up and stored away for use another season. Racks of empty combs so cleaned should be wrapped in paper with a small piece of two of naphthaline in each parcel and stored in a dry cupboard on a shelf for use another year. I advise bee-keepers to always glaze or box sections before sending out. It costs money and labour, but it pays to do it, not only from the financial point of view, but as helping to hold the trade together. Besides, it enhances the value to the tradesman by keeping it secure from wasps, flies, etc., while protecting the tender combs from the finger-and-thumb marks of careless assistants.

We have glazed every section sent out this season (except one dozen required for immediate use), and have had several large orders from different customers for despatch one after the other, and all have been glazed. It may seem tedious work to some, but it forms one of the most pleasant items of labour connected with bee-keeping in our household, for my good wife loves the work equally with myself.

I trust readers have attended to the work in the apiary mentioned in my last "Notes." If not, do not delay another week, but make ready for winter. If you have no "Hill's" device to place on top of your brood-frames, place two or three short pieces of split lath over the centre under the first quilt, then make sure that the quilt fits well down on all sides of the frames, and finally place extra quilts, or a chaff-cushion, and open the hive entrance to three or four inches. See that the roofs are weather-proof; if not, cover with a piece of thin zinc. This is durable, and, considering the time it will last it comes to be as cheap as anything. If painted light stone-colour, it is not more heat-absorbing than wood.

Melt up any old pieces of comb, also all scrapings, as soon as the work is completed, thus preventing the breeding of wax-moth, which, I hear, has become quite a pest in many parts of the country, and in our district also. We have always to be on guard to clear up every old comb, otherwise it is infested with larvæ if left only a short time during the summer months.—W. WOODLEY, Beedon, Newbury.

THE STANDARD FRAME.

[6454.] Readers of the B.B.J. will remember that in the early months of this year the question of the standard frame was the subject of much discussion. The impression left upon my mind by reading that discussion was that no sound and valid reason was forthcoming for making any change in the size of the frame; and I

maintain that unless it can be proved beyond all doubt that a departure from the size of the "standard frame" is a real step in advance, a step which the progress of apiculture makes it necessary for all who do not wish to be left behind to adopt, it would be a most fatal mistake for the B.B.K.A. to give its official sanction to such a change. Let experimenters use any size frames which their experiments dictate, but let the "standard" frame remain unchanged so far as its vital outside measurements are concerned.

I notice a letter on page 395 (6451) from Mr. W. J. Farmer, suggesting that the frame should be ¼ in. less in depth, as "it would enable bee-keepers to make their hives with less expense, because commercially there are no 9 in. planed boards obtainable." But how about the expense to the hosts of bee-keepers who already have hives made to take the present standard frame? This would indeed be robbing Peter to a very considerable "tune," in order to pay Paul an inconsiderable trifle. Moreover, I have never met with the slightest difficulty in getting 9 in. planed boards; whenever I have ordered such boards from a timber merchant they have been supplied without a hint that commercially they were not obtainable, so that I confess that Mr. Farmer's statement was news to me. There was one point which the discussion referred to brought out, and that was that the present frame is *not quite* strong enough in the top-bar. I say *not quite* strong enough advisedly, because, after all, it is only a very small percentage of these frames that "sag." This shows that the frame is *very nearly* strong enough. This slight defect is perfectly easily remedied by making the top bar a little *wider*, and many makers are producing such frames. A year ago I bought a number from a well-known London firm, the top-bars of which were exactly 1 in. in width; none of which has shown the least sign of "sagging."

There can hardly be any doubt that the "saw-cut" furnishes the neatest and most secure method for fixing foundation, but many of those who took part in the discussion voted against it, chiefly on the ground that it encouraged and harboured wax-moth. There is however, a very simple and effectual remedy for this fault, which I have practised for a number of years. It is this: Melt in any suitable tin a few lumps of paraffin wax, and with a brush paint over the top of the frame after the foundation is fixed, so as to entirely cover the saw-cut, and leave the top of the frame perfectly smooth with wax. No wax-moth grub will ever make its home on the top-bar of a frame so treated.

If I might presume to do so, I would venture to suggest that the B.B.K.A. should sanction a frame under the name of "The New Standard Frame," which should only differ from the old standard in having a wider top-bar. The bee-keeper would then know exactly what he was getting when he ordered the "New Standard" frame. At present every maker is a "law unto himself," and makes frames which are a *little* wider, or a *little* thicker, or a *little* different in some other way, so that uniformity is in danger of being lost, and uniformity in the movable parts of our hives is a very vital matter.—G. S. N., Godstone, Surrey.

"SHOWS AND SHOWING."

[6455.] Under the above heading your correspondent "Showing" (6449, page 394) refers to an important matter when applied to the subject of bee-appliance manufacturers competing in the same classes as the general public, who are often mere novices in the craft. It would be a good thing if some change could be made to get over this difficulty without interfering with the legitimate rights of bee-appliance dealers, etc., exhibiting and competing for the highest honours offered at the various exhibitions. Having attended the shows held at the Agricultural Hall, London, for several years now, I think it is regrettable to see the plums falling into the same basket every year, with so few variations.

I agree with "6449" that we ought not to be selfish to the extent of barring the *professional* from exhibiting, but there ought to be classes specially provided for the *specialists in the craft*. It is most discouraging to the budding bee-man to send a lot of goods to the large shows at considerable (though necessary) expense, to find he is "nowhere in it." I do not want to be hard on the dealers, or to say they are not scrupulously honest in showing goods; but where a large dealer is buying in thousands of sections yearly, what is there to prevent a selection of the best sent in, and use for exhibition purposes? The chance of infection is infinitesimal, and the temptation is most alluring, even to the most conscientious man, for, having entered the list of competitors, he is naturally anxious to get first, because of the advantage it gives him in the honey market. I have noticed sections carefully "faked" to deceive the judges, and that by a prominent exhibitor; cells carefully filled, and sealed, etc. Then again, in the extracted honey classes, a lot of tricks and devices are employed to get the splendid exhibits one sees at the large shows. Again, in the wax classes, the splendid

exhibits one sees proves that there are secrets behind it that baffle the novice, and as he looks at his poor stuff, upon which he has spent so much time and thought, he turns away disgusted, and probably is discouraged for ever after. I remember a conversation with a large dealer in wax (whom I frequently notice is a successful exhibitor in the wax classes), who told me he paid a lot of money for the secret of clearing wax for the manufacture of foundation, etc. That being so, one cannot be surprised if he now employs the secret to carry off the highest awards offered for public competition. I have heard this often discussed amongst bee-men, and suggestions made that the time is ripe for exposing and dealing with it. Perhaps the Editor will kindly offer some suggestion to guide us in this important matter.—A. E., Wilts, October 8.

TWO QUEENS IN ONE HIVE.

OVERSTORED BROOD-CHAMBERS.

[6456.] Whilst recently touring in Suffolk I came across two queens comfortably working in the same hive. The owner had housed a driven lot of bees in the hive referred to, and they took possession of the three outside combs. Two days later another lot of driven bees were run in, and these occupied the other three outer combs. At the time of my inspection (five weeks afterwards) both lots of bees were comfortably working through one entrance and feeding at the same feeder over the centre-combs. I thought this incident might be of interest to some of your readers but I am afraid one of the queens will be "missing" later on when both clusters meet, and the respective queens come into close contact. The honey season here has been a remarkable one all round, although in the early part of the summer nothing much was done by way of storing surplus. In August, however, an unusual amount of honey was stored. Bee-keepers generally were surprised to find extracted supers (put on for clearing up wet combs only) again filled (to my own knowledge in Suffolk) with beautiful honey. At my own home we had a similar honey-flow about the same period, but alas! the honey was too dark to be worth the trouble of extracting. I notice some of your correspondents are finding brood-chambers clogged with stores. I am afraid that there is rather too much honey crammed in brood-chambers this autumn, and have no doubt that some will be disappointed next spring in finding bees weak. My opinion is that this year stocks will have too much stores left on hand, and, in consequence, will be scarce of bees when most wanted. In some cases I noticed every cell of brood-combs filled with stores and not a bit of room for breeding. I think it will be advisable to insert an empty comb in centre of brood-nests, and thus avoid what must in some cases spell disaster through too early cessation of breeding brought about by queen being entirely cramped out.—Joseph Price, South Staffs.

BEE NOTES FROM ROSS-SHIRE.

A GOOD REPORT.

[6457.] With all its vicissitudes, 1906 must be classed as an excellent season. My own experiences have been the most favourable for many years. In the case of those hives run for comb-honey, my returns from actual sales show an average of fully £3 per colony—to say nothing of what was used in my home or given away. This, along with an increase of 100 per cent., is quite satisfactory. Sales have also been good. I am cleared out with the exception of about four dozen sections, and these, being mostly heather, are unlikely to lie long on my hands. Clover sold at 9d., and heather sections at 1s. each wholesale; paying figures both. Stocks all over go into winter quarters in excellent condition with abundant stores, so the future outlook is decidedly promising.—J. M. Ellis, Ussie Valley, October 3.

MY BEE WAGON.

[6458.] I received the extra copies of B.B.J. quite safe, and tender best thanks for the same, and also for inserting the photo of my bee wagon. I am pleased to think that the photo has created so much interest among members of our craft. I have received quite a big pile of letters from your readers, all seeking information about it and about bees or bee-keeping. I am unable to answer all this correspondence just now, but will try and do so later on, as I am at present full up with work getting my bees ready for the winter. If you will kindly insert this in next issue I shall feel obliged, and if any cost I will pay.—E. J. Thompson, Snaith, Yorks., October 3.

SWARMING VAGARIES.

[6459.] Many thanks for your kind reply to my "Swarming Vagaries" and "Distended Worker" in B.B.J. of September 13 (page 367). Probably you will not be surprised to hear that particular hive mentioned yielded only 4 lb. of surplus honey this season, while my other two hives between them gave me rather better than 70 lb. Very full and well-finished combs indeed. Yours very gratefully, "C., Bucks," October 6.

BEE-HIVES IN SHOP WINDOWS.

[6460.] No doubt when live bees are exhibited in a shop window they cause a crowd to assemble, but, I would ask, is it humane to resort to such a means of advertisement? We cannot, unfortunately, go through life without causing a certain amount of pain and death, whether we "go in for gardening" or keep bees; but to inflict unavoidable pain is a very different thing to doing it wilfully. It is quite easy to believe that the *Surrey Daily Argus* never thought its live-bee exhibition was hard on the bees as well as painful to all bee-lovers who understand the nature of the inconvenience caused to the insects by continued confinement, in the light, too, with the exhausting effort to get through the exasperating glass barrier to liberty.

I once pointed out to a Liverpool grocer that a similar exhibition in his window was cruel, and, to his credit, he agreed with my contention.

Let us discountenance such practices To sell our honey may be very difficult, but we must not be cruel in order to assist us to do so.—W. J. FARMER.

HIVES ON LEGS v. STANDS.

[6461.] I have noticed that most bee-keepers use the orthodox four legs on each hive. I wonder how they keep level. I use pitch pine quartering 3in. by 1½in. and 14ft. or 15ft. long edgeways, and nailed to cross pieces 3in. by 3in. by 18in., placed angleways. This frame can easily be placed level on three pairs of small brick piers. Hives can then be placed any desired distance. I find that length very suitable as a stand for four hives, and extremely convenient when manipulating.

Autumn Feeding for Bees.—It has been an interesting sight to see the bees—both driven lots and nuclei—carrying in pollen during the last few weeks, in contrast to other stocks well supplied with stores, whence scarce a single bee is on the wing, even when the sun has been shining full on the hives for hours. One wonders where the bees get such loads of bright orange-coloured pollen at this late season.—A. H., Wavendon, North Bucks, October 8.

WASPS.

[6462.] Has anyone ever tried keeping these interesting though, to the bee-keeper, noxious insects? We kept several at one time in ordinary bee-hives fitted with glass tops. The nests were procured by stupefying the wasps at night with smoke from a gunpowder squib (a "catherine wheel" unrolled does splendidly). Do not give too small a dose, or they may begin to wake up when the subsequent digging operations begin. With care, the nest can be extracted entire; any little damage done to the outside covering will soon be repaired when the inhabitants recover from the effects of the gunpowder smoke. It is a most interesting sight to see the wasps at work making "brown paper." A ball of chewed up rotten-wood is held in the two front legs and flattened out into a ribbon by the jaws, the wasp walking backwards at the same time. We are glad our tip re "cyanide" was of use to "L. S. C." It is a small return for the many useful things we gather from his communications. We would ask your correspondent if he has not made a mistake with reference to the wood-wasps? This should be *V. sylvestris*. *V. media* is similar to *V. vulgaris* in habit, etc., the only difference being that the yellow colouring on the abdomen is much darker in the former, while *V. sylvestris* is considerably the smallest of any of the English social wasps.

. *Braula cæca* (page 355).—We find these very prevalent this year, probably due to the very mild winter we had.—BELL BROS., High Beech.

AUGUST AND SEPTEMBER RAIN-FALL.

AUGUST.

Total fall, 2.32 in.
Heaviest fall, .45 in. on 1st.
Rain fell on seventeen days.

SEPTEMBER.

Total fall, 1.11 in.
Heaviest fall, .40 on 14th.
Rain fell on seven days.
—W. HEAD, Brilley, Herefordshire.

Queries and Replies.

[3419.] *Bees Dwindling in Autumn.*—Could you assist me with advice on the following points? I have six hives of bees, four of which have given a good amount of surplus honey, mostly from heather. On removing some supers to-day, I examined the brood-body and found almost every cell in the ten frames full of sealed honey, but scarcely any brood. I understand from the "Guide-book" that a strong lot of autumn-raised bees are wanted to carry on the colony until the spring, and, with this end in view, ask, should I remove the combs and replace them with sheets of foundation; or, on the other hand, will it be better to let things remain as they now are? I have a few drawn and partly-drawn-out combs by me, and could use these up if needed. I only started bee-keep-

ing in 1905, and did not make much of it at the time. Since then, however, thanks mainly to your most useful "Guide-book" and the "B.B.J.," I have increased my stock from one to six hives (all home-made), and they serve the purpose very well, as may be guessed, when I have taken about 200lb. of surplus honey from them.—Name sent for reference by CONQUEROR, New Forest.

REPLY.—It will be advantageous to remove two or three of the sealed combs of honey and replace with worked-out empty combs, as you have these by you. If feeding is done judiciously and a constant supply kept up, the queen will probably start laying for a week or two, and thus attain the object you have in view. Glad to hear of your success this season.

[3420.] *Wintering Bees on Unsealed Stores.*—I am the happy possessor of three colonies of bees. Two of them came in their hives in July last, and the third artificially swarmed as explained in the "B.B.J." of August 16 (No. 3,381, p. 328). On examining these hives on Saturday last I found larvæ and capped brood in each, and in one hive the brood was principally in the shallow frames in super, which I had left on in hope all would have hatched out ere this. On examining the frames of the artificially swarmed hive I noticed that one or two capped cells looked suspiciously like foul brood, and I therefore inserted a piece of stick into these and out of one came a dead bee, almost black and gluey. From a second the dead bee was yellowish, and a third brownish. I shook all the bees into the hive and removed the frame. I then uncapped all the other cells, and found all the larvæ apparently healthy except one, which I enclose herewith. The frame I removed from one of the other hives when artificially swarming. May I ask your advice, through your valuable paper, on the following points: (1) Is this foul brood? (2) If so, what steps ought to be taken to check, seeing it is now October? (3) I found a great many cells with uncapped honey—will the bees cap these? (4) Will it be all right to leave these with the bees? I might say I have been feeding with medicated syrup during September (recipe No. 6).—Subscribing myself, T. L., Penge, S.E.

REPLY.—1 and 2. We should really have a better sample to judge from. The tiny bit of comb had some sort of "contents," but, being probed prior to sending, the "remains" in the single cell were hardly distinguishable from wet pollen. It may have been a crushed larva, but we could not tell without much trouble, and so we should like a larger bit of comb, with a few sealed cells. 3. Not unless the cells are full and feeding is continued. 4. Bees do not do well on combs of food not capped over.

[3421.] *Bees Perished from Want after "Robbing."*—I am sending you by this post specimens of comb containing brood. Would you very kindly examine them and give the result in the next issue of the "B.B.J."? The entire colony from which they were taken has recently perished. I noticed some months ago that the bees were very inactive. I then examined the hive and found that the colony had dwindled down to a mere handful. I tried requeening, as I thought perhaps it had lost its queen, but this was clearly not the case, since both the queen and the whole colony, as I have already said, have perished. I enclose my card and sign myself—A BEGINNER, Dolgelly.

REPLY.—Comb bears the appearance of having been "robbed out." There is no trace of disease about the dead larvæ in cells, which seems to have perished for lack of warmth The case suggests queenlessness before close of the honey season, and that the motherless bees had been despoiled of their stores by robbing from neighbouring hives.

[3422.] *Blending Honey.*—1. My clover honey this year is dark owing to the limes, but it is excellent in other respects. I therefore ask: Shall I do right in mixing it with my heather honey, of which latter I have just been taking 100 lbs. from two hives? Therefore I ask you to please say (2) what proportion of clover I should put to the heather honey, if any? 3. I have some half-filled sections; would it be the best to save them for next year, or put them behind the dummy for bees to empty? Reply will oblige.—B. R., Sheffield.

REPLY.—1. If blended with care, a mixture of clover and heather makes a very saleable honey for table use. 2. Simply add sufficient to make the heather bloom predominate. Some prefer a mild heather flavour while others like it more strong.

ARE BEES WILD ANIMALS?

SINGULAR COUNTY COURT APPLICATION.

An exceptionally interesting application was heard in the Sheffield County Court recently, before his Honour Judge Mansel-Jones. The matter arose out of an execution issued by the High Bailiff in an action by George Slater and Sons, printers, of Sheffield, against John Hewitt, a bee-keeper, of Totley. The High Bailiff seized a number of hives of bees, and the application was by the Registrar for directions to the High Bailiff as to whether the bees constituted goods and chattels, under the County Courts Act, which the High Bailiff was entitled to seize. Mr. J. E. Wing appeared for the defendant, and Mr. E. W. Clegg for the plaintiff.

Mr. Wing contended that the High Bailiff was only authorised to seize the goods and chattels of the defendant, and the question arose as to whether bees constituted goods and chattels. He suggested that there were certain things exempt from distress, among them being certain wild animals. He contended that bees came under this definition, were wild, and belonged to no one, and were not seizable by the High Bailiff. All wild birds, such as partridges, and several wild animals came

under the same law. Mr. Wing quoted several cases illustrating his point.

Mr. Clegg, replying, stated that in his opinion, if the bees belonged to no one, plaintiff could not complain if they were seized.

His Honour asked if there could be any objection to the hives being seized.

Mr. Wing could not suggest that the hives were not goods and chattels.

Mr. Clegg then thought that the hives could be seized while the bees were in them.

Mr. Wing: The bees might object to that, and it is risky to annoy them! (Laughter.)

Eventually his Honour, stating that the point raised was an interesting one from an academic standpoint, said he must hold that the High Bailiff was justified in seizing the hives and bees.—*Sheffield Independent.*

SCHOOL CHILDREN'S BEE COMPANY.

A NOVEL UNDERTAKING.

How many shareholders in a big business concern would like to see a dividend of 166 per cent. paid on invested capital? That is the amount of the dividends just paid by the Hildenborough School Children's Bee Company. This novel concern is run in connection with the National Schools, and all the shareholders, who are acquiring, or have acquired, a practical knowledge of bees, are school children. The shares are sixpence each, and the holders are receiving tenpence per share as their dividend, some taking it in money, and others in honey. It is very amusing to hear the boys buying and selling shares, which they actually do. In view of the excellent returns, shares are now at a premium.—*Kent Messenger.*

Bee Shows to Come.

A nominal charge of 2s. 6d. is made for notices (not exceeding 7 lines) in this column, 10 lines charged 3s. 6d.; up to 15 lines 5s., which covers cost of insertion from order till date of show. Cash should accompany orders for insertion.

October 9 to 12, at the Agricultural Hall, London.—Show of Honey and Bee Produce in connection with the British Dairy Farmers' Association. Numerous and liberal prizes for honey, etc., including the valuable Silver Challenge Cup of the B.B.K.A. **Entries closed.**

October 18 to 21, at Waverley Market, Edinburgh. — Honey show in connection with the Tenth Annual Edinburgh and Midlothian Industrial Exhibition. All open classes. Beautifully illustrated prospectus, price 2d., from A. Hutchinson, 15, Leith Street, Edinburgh. **Entries closed.**

October 18 and 19, at Kilmarnock, N.B.—Honey Show in connection with the annual exhibition of the Ayrshire Agricultural Society. Schedules on application to John Howie, Secretary, 58, Alloway Street, Ayr. **Entries closed.**

November 9 and 10, at Chorley, Lancs.—Honey Show of Lancs. B.K.A. in connection with Chorley Chrysanthemum Society's Annual Show. Four Open Classes. Exhibitors allowed to bring honey for sale. Schedules from W. G. Smith, Town Hall Auction Rooms, Chorley, Lancs. **Entries close November 3.**

Notices to Correspondents & Inquirers.

Letters or queries asking for addresses of manufacturers or correspondents, or where appliances can be purchased, or replies giving such information, can only be inserted as advertisements. The space devoted to letters, queries, and replies is meant for the general good of bee-keepers, and not for advertisements. We wish our correspondents to bear in mind that, as it is necessary for us to go to press in advance of the date of issue, queries cannot always be replied to in the issue immediately following the receipt of their communications.

THE CONFECTIONERS' AND GROCERS' EXHIBITION.

*** Several letters referring to the recent Confectioners' and Grocers' Exhibition at the Agricultural Hall have been received, and are not lost sight of, but for the present we would simply invite the attention of correspondents to the fact that these particular shows are for traders and consumers, as well as bee-keepers, and when members of our own craft talk about debarring traders from competing—as some do—they are ignoring the main object the directors have in view in giving liberal prizes in order to attract the classes mainly concerned. It is also far from wise to talk about "giving amateurs a chance" by excluding well-known prize-winners. To do this would prevent beginners from knowing what can be done on the show-bench by those who have attained high position in the craft for the quality of their produce and know how to place it before the public in attractive form.

*** Labels for "Heather-blend" Honey.—Can any reader oblige a correspondent (writing from "Bridge of Allan"), by giving the address of a dealer where he can get labels for mixed heather and clover honey? If so, please send name of dealer on postcard to "B.B.J." office, and we will forward same to Scotland.

ANXIOUS (Harrop Green).—Queen cast out.—1. Judging by appearance the dead queen sent was the mother-bee of the Carniolan stock. 2. The only thing to do is find out for certain that the stock is queenless; this done, the bees must either be united to another colony, or a laying queen introduced.

W. BRAUSTON (Hereford).—Disinfecting Shallow Frames.—It will be quite sufficient to spray the combs with soluble phenyle as directed on page 167 of Bnide Book.

"KENDAL" (Cumberland).—Bees like Dusty Millers.—The bees sent have apparently been working on the Canadian or (Giant) Balsam. They always look "like dusty millers" when that plant blooms in autumn near the hives.

"WIZARD" (Alderley Edge).—Bee Nomenclature.—Dead queen sent is a first cross Ligurian. It is too dry for examination of ovaries, but appears to be a virgin queen.

A. S. B. (Pudsey).—Heather Honey.—A "press" is absolutely necessary to remove ling honey from combs because of its density. The only other way to get it from combs is to slice the combs up and hang them in a flannel bag before the fire; then use pressure to force the honey through the flannel, but it is a messy job.

AMATEUR (Midlothian).—Doolittle's "Golden Prolific" Bees.—We are not aware that these bees leave their own hives and "mix promiscuously with all other stocks within reach." It must surprise your friends, whose bees are at the heather, to find the "yellow jackets" in all their hives, but we have not heard of this peculiarity before. Perhaps some other readers will kindly give their experience of these bees?

REV. T. GARLAND (London).—The "Leaf-Cutter" Bee.—We have no blocks illustrating the above. Messrs. Lovell, Reeve, and Co., Henrietta Street, Covent Garden, would probably have such on sale, but they would not, of course, loan them to anyone.

M. H. JONES (Wrexham).—Earwigs in Hives.—There must be something wrong with your friend's management of his "seven hives" to have secured no surplus honey at all this year and "finding the hives full of earwigs!" The bees must be either diseased or so weak from other causes as to have given up work and allowed free ingress to the earwigs, which no stock of bees should do. The earwigs seek the shade afforded by the half-empty hives, but do not "eat the honey," as your friend supposes. Our advice to your friend is, procure a text-book on bees, and from it he may gather information which should enable him to keep clear of such trouble as that complained of.

A BEGINNER (Braintree).—Wax-moth in Hives; and Buying Worthless Skeps of Bees.—There is no means of protecting weak stocks from the ravages of wax-moth. Only strong colonies can contend with these "bee-enemies." With regard to the worthless stocks purchased, you should deal with the seller about that, but the only chance of a beginner is to purchase from a reliable man and start fair with a good, healthy stock of bees. To do otherwise is to court failure.

DODO (Birmingham).—Rust about Bees and Hives.—There can be no question about rust being objectionable to bees and their keepers, but the very slight amount that could accumulate in "feeders" cannot do harm to the syrup placed in them for the bees' use.

J. W. (Durham).—Complaints against Advertisers.—It is utterly impossible for us to give advice (even if disposed to do so) with regard to complaints against unfair treatment on the part of advertisers, without hearing both sides of the case. This we have proved over and over again, and in the great majority of cases the fault lay with buyers. If a man will not send satisfactory goods, after taking cash for same, the remedy lies in the County Court. Otherwise a solicitor should be consulted. To publish names, along with defamatory statements is libellous, and must be guarded against.

H. W. W. (Cirencester).—Bee Candy.—Your sample will answer for present use, but it may become very hard after moisture has gone, and be then unusable by the bees as food.

Honey Samples.

A. L. R. (Tamworth-in-Arden).—Samples 1 and 2 are mainly from clover, but there is plain evidence of bees having worked on other plants, which we cannot name. No. 3 is dark in colour and poor in quality, owing to honeydew from tree leaves being within reach of your bees.

E. THORPE (Pateley Bridge).—Your honey is almost entirely from "ling" or true heather; but it has a small admixture from other sources that deteriorates the quality somewhat. It should, however, sell well, as being a good heather honey.

Suspected Combs.

H. M. G.—There are slight signs of incipient foul brood in comb sent.

J. C. P. (Kew).—Sorry to say the sample of comb is affected with foul brood of malignant type, and we advise burning bees, comb, and frames. It is useless trying to cure bad cases like yours.

J. B. I. (Saltney).—Comb shows a decided case of foul brod.

*** *Some Queries and Replies, &c., are unavoidably held over till next week.*

Special Prepaid Advertisements

Twelve words and under Sixpence: for every additional Three words or under, One Penny.

QUEENS, FINE 1906, naturally reared, price 2s. 6d., post free. — PIDDUCK, Sunnyside, Alsager, Cheshire. T 89

CROCUS BULBS (yellow), Arabi Alpinus slips, 100 1s., free.—BRAYSHAW, Aultmore, Keith. T 83

3 TON LIGHT CLOVER HONEY, guaranteed pure, 4 6d. per lb.; quotations bulk; sample, 3d.—ALBERT COE, Apiary Hall, Ridgewell, Halstead, Essex. T 80

GOOD SUPPLY of YOUNG DRIVEN BEES, headed with 1906 Queens, 4s. 6d. per lot, skep or box to be returned.—G. A. GILLETT, Prudential Assurance Co., Moreton-in-Marsh. T 86

BEES.—Stocks on eight frames, Black English, with 1906 Queens, guaranteed healthy and perfect condition, £1; skeps, 12s. 6d.; safe delivery. Honey, light extracted, liquid or granulated, screw jars, 8s. 6d. dozen, £5 gross; bulk, 53s. cwt.—CHARTER, Tattingstone, Ipswich. T 54

Prepaid Advertisements (*Continued*).

STRONG STOCKS of HEALTHY ITALIAN HYBRID BEES, in well-made double walled hives, well stocked with food, for sale. Write 13, The Circus, Greenwich. T 88

1½ CWT. FINEST WHITE CLOVER HONEY, in 28 lb. tins, 14s. 6d. each, 56s. cwt.; also quantity in 1, 2 and 3 lb. glass jars, 7s. dozen lbs; sample 3d.—LILLEY, Mill Farm, Dean, Kimbolton. T 77

EXTRACTED HONEY, 56s. per cwt.; in 14 lb. tins; sections, 7s. dozen; £3 18s. gross.—ARTHUR ADCOCK, Meldreth, Cambs. T 76

EXTRACTED CLOVER HONEY for Sale; light colour, 56s. per cwt.—THOMAS PILGRIM, Great Chesterford, Essex. T 74

SELL or Exchange secondhand Hives, Extractor, Ripener, Feeders, etc. Particulars stamp.—PRICE, Expert, Stonside Apiary, Old Hill, Staffs. T 78

SECTIONS for Sale, both heather and clover; reasonable terms; price on application.—SPENCE, East Witton, Middleham, Yorks. T 81

WANTED, BEES; exchange for Irish Water Spaniel, broken, second season.—JOHNSON, Butterton, Newcastle, Staffs. T 82

FIRST QUALITY HEATHER HONEY, in 1 lb. screw-cap jars, 9s. dozen.—THOS. WILCOX, Talywain, Monmouthshire. T 85

PAIR of RABBITS, not related, also five young rabbits, all grass fed, on rail, 11s. the lot; on exchange for two 4 lb. lots of Driven Bees, with 1906 Queens.—A. STREET, Pitsea, Essex. T 84

DARK HONEY for sale, in quantities to suit purchaser, 6d. per lb.—PHILLIPS, Beekeeper, Stevenage. T 71

FOR Sale, eight STOCKS of BEES, 30s. each, also three Observatory Hives, six racks of shallow frames, 3s. each.—"C. V.," 19, Crescent Road, Bromley, Kent. T 72

FOR Sale, twenty STOCKS of BEES, in Taylor's Colonial Hives, with two section crates to each hive; must be sold; hives nearly new.—J. WEBSTER, Hitchin.

GRANULATED 1905 HONEY wanted, any quantity, 5d. per lb., carriage paid. Send sample to WYATT, Bishopswood, Chard, Somerset. T 73

STOCKS on four frames, 10s. 6d.; ditto in skeps, 12s. 6d., 13s. 6d., with 1906 Queens; guaranteed healthy.—W. WOODS, Normandy, Guildford. T 87

THOROUGHLY experienced and practical Bee Expert seeks Situation; gardening (no glass), poultry, fair amateur joiner, good frame hive maker. W. PALMER, 174, Curzon Street, Netherfield, Nottingham. T 79

FINEST 1906 EXTRACTED HONEY, 28 lb. tin, 14s.; tins free Sample, 2d.—R. M. BROWN, Holly Street, Luton. T 63

GOOD HONEY, 28 lb tins, 6d. lb. — GEORGE THOMPSON, "Beecroft," Helpringham, Lincolnshire. S 12

HEALTHY DRIVEN BEES, with 1906 Queen, 4s per lot; none under 4 lbs. sent out; packed free.—HARRISON, Bee Farm, Middleton, Pickering. T 59

FINEST WHITE CLOVER HONEY, in 28 lb. tins.—H. BROUGHTON, Barrow, Hull. T 51

1½ CWT. of GOOD HONEY, 56s. per cwt.; also 100 Sections, slightly granulated, 6s. 6d. per dozen.—CUCKSEY, Mildenhall Road, via Soham. T 56

QUEEN HUMBLE BEES FOR NEW ZEALAND.—A large number of these having been received, no more are wanted.—F. W. L. SLADEN, Ripple Court Apiary, near Dover.

SALE or Exchange for Bee appliances, collie pups (good working strain). Particulars, stamp.—MOSELEY BANK APIARY, Hallow, Worcester. T 52

WANTED TO PURCHASE: Heather Sections, delivered in good condition to Manchester; Heather Run Honey, delivered to Lavington Station (G.W.R.). Pure Beeswax, any quantites delivered Lavington Station. In making offers send samples Run Honey and Beeswax.—GORDON ROWE, Honey and Beeswax Merchant, Market Lavington, Wilts.

1906 GRANULATED LIGHT HONEY, pound screw-cap glass jars, 8s. 6d. dozen; yellow crocus, snowdrops, 1s. 100; daffodils, white narcissus, 1s. 6d. 100, 2½d. dozen; mixed narcissus, daffodils, 1s. 100, 2d. dozen; hyacinths, 1s. 6d. dozen; Chapman honey plant, 3d. packet, post free.—WEST, 83, Stoke Road, Gosport. T 41

APIARY, with connection, 14 bar-framed hives, double walls, cork packed, strong, healthy stocks, average yield 75-20 lb. each, complete outfit.—FLUDDER, Stoke-by-Mayland, Colchester. T 48

CLOVER HONEY (guaranteed pure); 1 lb. screw-cap bottles, 77s. gross., 7s. dozen; ½ lb. ditto, 45s. gross., 4s. 6d. dozen; bulk, 48s. cwt., 25s. 56 lbs.; sample, carriage paid, 8d.—TURNER BROS, Sandpit Poultry Farm, Croydon T 49

ROOT'S "A.B.C. OF BEE CULTURE" (1903), perfectly new copies, 3s. 6d., post free.—MANAGER, B.B.J. Office, 8, Henrietta Street, Covent Garden, London, W.C.

SECTION GLAZING.—Best quality lace paper, made especially for bee-keepers' use; 100, in white pink, green, or blue, 6d., 300 1s. 4d., 500 2s. 2d., 1,000 3s. 9d., post free; lace one side.—W. WOODLEY, Beedon, Newbury. R 27

COMFORTABLE APARTMENTS for Brother Bee-keepers visiting Douglas. Terms: Tea, bed, and breakfast, 3s. 6d; or full board, 5s. per day.—MORSLEY'S, Merridale House, top of Castle Drive, Douglas, Isle of Man.

WANTED, for scientific purposes, QUEEN BEES and WORKER HORNETS? Will brother bee-keepers oblige?—HERROD, Apiary, Luton.

THE HONEY BEE.

Its Natural History, Anatomy, and Physiology.

By T. W. COWAN, F.L.S., &c., &c.

Thoroughly Revised and brought Up to Date.

Illustrated with Seventy-three Figures of One Hundred and Thirty-eight Illustration

In "art" covers, price 2s. 6d.; postage, 3d.

Editorial, Notices, &c.

BRITISH BEE-KEEPERS' ASSOCIATION

The monthly meeting of the Council was held at 105, Jermyn Street, S.W., on Thursday, October 11, Mr. W. Broughton-Carr occupying the chair. There were also present Miss Gayton, Messrs. L. Belsham, T. Bevan, J. B. Lamb, J. P. Phillips, Ernest Walker and the Secretary. Letters expressing regret at inability to attend were received from Messrs. T. W. Cowan, R. T. Andrews, W. H. Harris, H. Jonas, A. G. Pugh, W. F. Reid, and P. Scattergood. The minutes of the previous meeting were read and confirmed. Three new members were elected, viz.:—Mr. Thos. Burberry, Hook, Winchfield, Hants; Mr. P. W. Miles, Alburgh, Harleston, Norfolk; and Mr. Wm. Paterson, 12, Montague Terrace, Ayr, N.B.

On the recommendations of the examiners it was resolved to grant Third Class Expert Certificates to Miss Grace E. Shaw, Messrs. W. G. Darker, H. R. Ellison, W. F. Hosegood, Frank Hubbard, A. H. Peach, F. Pickersgill, and W. H. Weller.

The remaining business consisted of making the necessary arrangements for the Conversazione of members following the Council meeting, and reported elsewhere. The next meeting of the Council will take place on Thursday, November 15.

CONVERSAZIONE.

On the motion of Mr. Walter F. Reid, seconded by Mr. Carr, General Sir Stanley Edwardes was voted to the chair, and the attendance included the following ladies and gentlemen:—General Sir Stanley Edwardes, Rev. W. E. Burkitt, Miss Gayton, Miss A. M. Gayton, Miss Hodges, Mrs. Hills, Mrs. Illingsworth, Miss E. B. Sinckler, Messrs. T. Bevan, L. Belsham, E. Bontoft, F. Boulton, F. J. Bernau, W. Broughton Carr, W. E. E. Charter, R. H. Coltman, E. Chapman, C. Dunn-Gardner, Geo. Dow, E. E. Ford, G. S. Faunch, J. Garratt, W. J. Goldsworthy, A. W. Goldsworthy, L. L. Goffin, Geo. Hayes, C. Hayes, W. Hawkes, F. D. Hills, M. Hawker, B. Harding, F. W. Hunt, W. Herrod, J. Herrod, L. Illingsworth, J. B. Lamb, W. Martin, P. W. Miles, J. C. Mason, W. P. Meadows, H. Morgan, L. McNeill-Stewart, J. P. Phillips, A. E. Paul, A. H. Peach, W. F. Reid, C. H. Rose, A. W. Salmon, Ernest Walker, F. B. White, W. Walker, A. Willmott, W. Boxwell, and E. H. Young.

After taking his seat the chairman called on the secretary to read letters from prominent members expressing regret at their enforced absence from the meeting. Mr. Cowan, he said, was unfortunately prevented by illness from appearing to open the discussion relative to the first item on the agenda, viz., the bee disease known as "Black Brood." In continuing, the speaker said he was sure all would join with him in sympathy for their chairman, on account of the reason for his absence. Nothing short of ill-health would prevent his being present. He (the chairman) was glad to see a larger show of ladies than usual, and hoped that the proceedings of the meeting would augment their interest in bee-culture.

Mr. F. B. White then proposed, seconded by Mr. Bevan, that a message expressing the sympathy of the meeting be conveyed to Mr. Cowan under the regrettable circumstances which prevented his attendance that evening, with a hope that his illness would speedily pass away. This resolution, after a few words of commendation from the chairman, was carried unanimously. At this point Mr. Bevan suggested that Mr. Carr should make some explanation on the subject of black brood, which was to have been started that evening by Mr. Cowan, but the chairman asked that Mr. Durrant should first be permitted to bring before the meeting an apparatus he had devised for the use of bee-keepers, as he (the inventor) was obliged to leave the meeting early.

This agreed to, Mr. Durrant laid the contrivance on the table, and proceeding to explain its use, said he had been nearly twenty-five years a bee-keeper, and felt justified in thinking he had passed the days of his novitiate. During that period, in company with other bee-keepers, he had experienced great difficulty in getting wet combs, scraps of honey, and unfinished sections cleaned up quietly by the bees. After a great deal of thought and consideration, he had hit upon a plan of meeting that difficulty. If he put wet comb in the open it excited robbing, and fed other people's bees at his expense. He had, therefore, made what he would describe as "Durrant's cleaning up and feeding tube," a sample of which he produced, and handed round for inspection. It was in shape three sides of an oblong; the angles were rather short, the length being from 15 in. to 18 in. The entrances and exits were at the end of the angles, over which were fitted tin caps. The space in the tube was about $\frac{3}{8}$ in., and the tin ends were made to taper down to $\frac{1}{4}$ in., so as to fit into the entrance of the hive. When fully perfected, it would be registered and made in a more workmanlike manner. As regarded the application of it, an empty hive was brought up close to

the stock which the bee-keeper wished to do the work of cleaning up; one end of the tube was pushed into the entrance of the hive containing the stock, the other end into the entrance of the empty hive. The combs, scraps, and unfinished sections, or any waste honey which was to be cleaned up, was placed in the empty hive, the latter being made perfectly bee-proof. The entrance to the hive containing the bees should be closed to within about two inches. The bees could be enticed into the tube by putting a little honey into each end by means of a feather, and pushing it down into the large part of it. So far he had been very successful in using the contrivance, which effected its purpose satisfactorily, but he was making further tests, and hoped to give additional details later on.

Mr. Reid thought Mr. Durrant's idea a useful one, and that it met a want in the apiary. They all knew what robbing meant, and if it could be prevented in so simple a manner a distinct advantage would be gained. He (Mr. Reid) would, however, suggest that the passage-way be covered with celluloid, so that the bees could be seen to what extent they were carrying out the intended object.

Mr. Hayes would like to ask Mr. Durrant if he found any difficulty in giving to the bees honey from other stocks, because this was at times apt to cause quarelling among the bees themselves. He (Mr. Hayes) also supposed that the appliance would be put on in the evening only, so that the work of clearing the combs would be done at night when no bees were on the wing.

Mr. Durrant in reply said the tube could be used at any time, and as soon as the bees found the wet combs they would begin their work of clearing them up and taking the honey into their own hive. By removing the cover of the box containing the combs it was quite easy to see what had been done, and when the combs were cleaned the bees would return to their hives.

Mr. Illingsworth asked if there was trouble in getting the bees to enter the tube at the start, and when they had entered it did they clear the combs quicky?

In reply Mr. Durrant said all that was necessary was to put a little honey with a feather as "bait" at the entrance to tube entrance to insure the bees finding their way to the web combs. He also said that if the bee-keeper wanted to feed his bees that could be done in the quickest way by the contrivance before them.

The chairman in summing up the matter thought the invention was simple and would serve a good purpose, and on behalf of the meeting he thanked Mr. Durrant for bringing it before them.

Upon the invitation of the chairman Mr. Carr then made a few remarks on the subject of black brood, which Mr. Cowan, but for his untimely illness, would have introduced that evening. Unfortunately, he (the speaker) knew very little about this bee disease from the scientific standpoint, but it might be well to mention what had been done up to date in the hope that Mr. Cowan on a later occasion would be able to explain his views. He (Mr. Carr) produced a case in which were arranged a number of glass tubes containing the larvæ of black brood in various stages, and these were handed round for examination, the members being asked not to change the positions of the tubes as they lay in the case, because, as shown, the different stages of the disease could be traced. In the latest stage the larvæ was dry when removed from the cell, and they would observe that although the nutrient matter on which the bacilli fed had disappeared, there still remained distinct traces of the head, thorax, and outer covering of the abdomen. Whereas in the case of foul brood the dead larva decayed and became ropy or stringy, and remained so till the whole dried up, leaving nothing but a tiny brown scale in which would be found the spores of the disease. But this was not so with black brood. He had had samples of the latter from different quarters of the country, and no one could mistake the symptoms. In black brood there was no stringy ropiness, but the contents of the abdomen became soft and of reddish brown in colour, remaining so till it dried up, leaving only the outer covering of the abdomen already mentioned. The tubes showed the larvæ in the different stages of development. In this country they knew little of the disease, although they hoped that later on it would be thoroughly investigated. There evidently would be samples enough of the real article to be had during the season for the use of investigators, who may take the matter up. In America some bee-keepers regarded it as not very alarming, but although some were able to get rid of it a lot of trouble was caused in doing so when the outbreak occurred. In concluding, he (Mr. Carr) recommended bee-keepers to be watchful for the symptoms. There was no need to trouble readers of the "B.B.J." with any descriptions of it at present, but he hoped they would inquire and tell what they knew about it to the mutual advantage of all.

Mr. Reid wondered whether the disease was contagious like foul brood. Mr. Carr thought the evidence tended in that direction, but it was somewhat contradictory. Some American authorities were alarmed, while others did not consider it of much importance. Mr. Ernest Walker said he was testing the matter in his own apiary

whether the disease was contagious or not. Last autumn he found suspicious cells here and there in the combs in one or two of his hives and an occasional dead grub, but did not know the cause of what he saw except that it was not foul brood. There were just a few of these dead grubs seen over seven or eight combs; but they disappeared, and no sign of the complaint was to be found in the spring, when the bees were found to be doing well. They were all supered about June 13. He did not examine them carefully at the time, but about July 15, as some of the hives were found to be not doing so well as might be expected, he swarmed one hive in the ordinary way, took the comb, put it in a new hive with starters only, and one comb.

He did not examine the combs or bees then, but he thought the latter wanted waking up, and accordingly gave them back their supers. Holidays intervened, and after returning home he found that of the nine combs left in that hive all the grubs had hatched out with the exception of those in twelve to twenty diseased cells. He then guessed the appearance to be indicative of black brood; in fact, the dead larvæ were exactly like those exhibited in Mr. Carr's preserved specimens as shown. But at the time he decided to treat the ailment by getting the bees off combs (as was done in cases of foul brood) and starving them for forty-eight hours. They were afterwards put back on full sheets of foundation, and given a fresh queen, and they were found perfectly healthy. But with regard to the other hive every comb that had been built from "starters" had the disease in it, and so he decided to treat it in the same way, and this also proved equally satisfactory. He thought there was no doubt that the disease could be cured by treating it in the same way as foul brood; but perhaps that remedy might be considered too drastic, and if simpler means could be found it would be an advantage. About mid-July he examined two other stocks, both of which had the complaint pretty badly, thirty cells being diseased. Each of these stocks had old queens, and as he was leaving town he could not attend to them; but on returning he swarmed them artificially, and had got queens ready and combs also; but upon examination he found five young queens in both hives, which the bees themselves had raised. They had cleared out the disease, and all the fresh brood was clean and healthy, and remained so now. And yet those queens were raised from the diseased parent queen (if she was diseased), but the fact was that the new young queens had a beneficial effect. Whether the cure was a lasting one remained to be seen next year. He was anxious to test whether the disease was carried in the honey, and had therefore given one of the removed combs to a healthy colony, and intended to watch closely the result. He had, he thought, established that black brood could be cured as foul brood could. As from the first week in August those hives had been healthy.

(*Report continued next week.*)

THE DAIRY SHOW.

The British Dairy Farmers' Association held their thirty-first annual show at the Agricultural Hall, London, on Tuesday, October 9, and three following days.

The honey section was staged in the Minor Hall, and a large display of very fine honey was shown, the total entries numbering 118.

The judges made the following awards.

Twelve 1-*lb. Jars* (*Light*) *Extracted Honey* (22 entries).—1st, James Lee and Son, Martineau Road, Highbury, N.; 2nd, H. W. Seymour, Henley-on-Thames; 3rd, John Carver, Wellington, Salop; 4th, E. C. R. White, Newton Toney, Salisbury; v.h.c., J. Pearman, Penny Long Lane, Derby; Samuel Cartwright, Shawbury, Shrewsbury; W. J. Cook, Binbrook, Market Rasen; R. Morgan, Cowbridge; h.c., T. G. Hillier, Andover; Miss G. Wood, Alton, Hants; Sydney Durose, Burton-on-Trent; E. C. R. White.

Twelve 1-*lb. Jars* (*Medium*) *Extracted Honey* (*other than Heather*) (21 entries).—1st, Chas. Lodge, High Easter, Chelmsford; 2nd, Jas. Lee and Son; 3rd, H. W. Seymour; 4th, Mrs. Lawrence, Shrivenham, Berks; r. and v.h.c., J. Trineman, Lostwithiel, Cornwall; h.c., Frederick J. Old, Piddington, Northampton; R. Morgan; c., John Carver.

Twelve 1-*lb. Jars* (*Dark*) *Extracted Honey* (*including Heather Mixture*) (8 entries).—1st, Jas Lee and Son; 2nd, H. W. Seymour; r. and v.h.c., Richard Brown; h.c., E. C. R. White; John Carver.

Twelve 1-*lb. Jars Extracted* (*Ling*) *Heather Honey* (7 entries).—1st, Thomas Walker, Hawkshead; 2nd, W. Sproston, Shugborough, Staffs; r. and v.h.c., John Helme, Norton Canon, Weobley; v.h.c., F. F. Upton, Rugeley, Staffs.

Twelve 1-*lb. Jars Granulated Honey of* 1905 *or any previous year* (9 entries).—1st, Richard Brown; 2nd, F. W. Frusher, Crowland, Peterborough; 3rd, H. W. Seymour.

Twelve 1-*lb. Sections of Comb Honey* (14 entries).—1st, J. Pearman; 2nd, H. W. Seymour; 3rd, Sydney Durose, Burton-on-Trent; r. and v.h.c., Jas. Lee and Son;

h.c., E. C. R. White; Richard Brown; John Carver.

Display of Comb and Extracted Honey (7 entries).—1st, H. W. Seymour; 2nd, S. P. Soal, Rochford, Essex; 3rd, Jas. Lee and Son; r. and v.h.c., Richard Brown; v.h.c., H. W. Seymour; h.c., John Carver.

Beeswax (not less than 2 lb.) Judged for Quality (15 entries).—1st., E. C. R. White; 2nd, Chas. Lodge; 3rd, H. W. Seymour; r. and v.h.c., J. Pearman; v.h.c., F. Harris, High Ferry, Sibsey; h.c., H. W. Seymour; Richard Brown; c., W. F. Trineman, Saltash, Cornwall; E. C. R. White; R. Godson, Tothill, Alford, Lincs.

Beeswax (not less than 3 lb.) in Marketable Cakes suitable for the Retail Trade (12 entries).—1st, J. Pearman; 2nd, F. Harris; 3rd, H. W. Seymour; r. and v.h.c., E. C. R. White; v.h.c., Jas. Lee and Son; F. W. H. Frusher; h.c., Chas. Lodge; John Carver; c., George Deller, Royston, Herts.

Interesting and Instructive Exhibit of a Practical Nature (3 entries).—1st, John Carver; r. and v.h.c., Jas Lee and Son; c., H. W. Seymour.

The Silver Challenge Cup of the B.B.K.A. was awarded to H. W. Seymour, who having previously won it in the years 1902 and 1903, the cup now becomes his absolute property.

Correspondence.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

*Communications relating to the literary department, reports of Associations, Shows, Meetings, Echoes, Queries, Books for Review, &c., must be addressed only to "*THE EDITORS of the 'British Bee Journal,' 8, *Henrietta-street, Covent Garden London, W.C." All business communications relating to advertisements, &c., must be addressed to "*THE MANAGER, 'British Bee Journal,' *Office, 8, Henrietta-Street, Corent Garden, London, W.C."*

**** In order to facilitate reference, Correspondents, when speaking of any letter or query previously inserted, will oblige by mentioning the number of the letter as well as the page on which it appears.*

AMONG THE BEES.

CURRENT TOPICS.

[6463.] *Philanthropic Bee-keepers.*—A bee-keeper (A. H., Wavendon, page 346), who prides himself on being up-to-date and also a practical man, lately expressed a doubt about getting large takes from swarms of the current year, and he has dubbed those who sell such paying swarms philanthropists. If so, Messrs. Herrod and Woodley have played the rôle this year as far as I am concerned. I obtained a 15s. swarm from Beedon on June 6, and it turned out such a success that it ended the season by yielding me a surplus take of 109lbs. of beautiful honey in sections all well finished, and several pounds in sections partly finished. From Luton as late as June 27 came a 15s. swarm. "A. H." would no doubt have been content if it had filled its nine or ten frames. Well, it not only did that but it gave me a surplus of 89 well-finished sections, in addition to several well on to being finished. Being a practical man "A. H." must bow to facts. So I have supplied them without comment. I see swarms advertised much cheaper than the price given above; but, recognising that something more than the actual weight of bees goes to make up a paying swarm I generally prefer paying the higher price, because I find it pays. "A. H." gives a cheap weed-killer (page 346) which I mean to test next season. It is cheap, easily obtained, and its application is simple, so that, if it is effective, bee-keepers should take a note of it. Many of these simple practical "tips" make up the value of the JOURNAL for the whole year.

Prices Current.—I wish I could get down to Pickering and I would do my best to pickle somebody there. What! Heather honey at 7d., rubbish! Don't, please, Mr. Wright. You are not right, you are wrong. Withdraw that advertisement at once! It must have been a slip of the printer, who mistook your price of 1s. for 7d.? Look at Mr. W. McNally's statement in last RECORD, "Real heather honey can easily fetch 1s. 6d. per lb." See, Aberdeen quoting at least 1s., Banffshire 1s. 2d., and Selkirk 1s. 3d. Why should York be a black sheep in a white flock?

Clover honey sold well here at first, but lately several dealers have got overstocked. Prices varied from 8d. to 10d., with perhaps an average of 9d. Sections were very fine, and the quality first-class. All my own went in one lot to the centre of England. Heather honey has gone in small lots at 1s. 2d. as yet.

I think bee-keepers are to a great extent responsible for the reduction in price. They rush their honey too suddenly into the dealers' hands. If they would only have more patience, and study the market, they would do much better. The fact is that over a great part of the country there has been a shortage in the surplus, so that the prices ought to rule firm, and easily maintain last year's average. On dry soils, where the drought told, the returns have been light for clover and flower honey especially.

Cappings of Comb.—I think Mr. Crawshaw and myself practically agree on the subject of *failing* queens. The difference, if any, is only one of degree, with the inclination of the see-saw rather in his favour. I would not like to carry out his suggestion of hiving on shallow-combs. The brood nest is not the place for such frames. I think he is right in holding that "casts" build only worker-comb. He will see an improvement on hiving a swarm or driven bees from above, or in a side space, in following paragraph.

The scent theory often accounts for irritability. Any disagreeable odour is an inciting cause. Perspiration on a close warm sunny day undoubtedly annoys bees. So does a foul breath.

In giving some late driven lots six fine fat combs of honey and two empty ones, I arranged them as follows:—One half-filled comb occupied the centre, the empty combs were placed on each side, and the plumpest and heaviest outside. These last were left with a space of at least a quarter of an inch between the metal dividers. Bees can cluster with this space and rearrange their stores before the approach of winter to suit their own ideal.

Race, or its influence, persists. The heavy jaw and the woolly head, crops up in odd cases in families, after lying dormant for a generation or two. You may have to go back a century for their origin.

Hiving Swarms and Driven Bees.—Many advise throwing a swarm or driven lot down upon the top of the frames after spacing these out widely. I don't approve of the system. Placing them in a side space is only a modification of the above plan and is equally reprehensible. An enlarged platform in front of the hive, covered by an old newspaper, is the best place to throw down the bees. If it is desirable to see the queen place the bees back some distance from the hive front and let them run up to the entrance gradually. A minute or so after evicting them from the skep or box every head is turned to the entrance, and it generally proves a race for home sweet home!

Should the weather prove inclement or if when on a driving excursion you are late in arriving home, place an empty W.B.C. body-box on the floor board. Throw your bees smartly into this receptacle and immediately place overhead the true body-box with frames in position, and you will find that the bees will quickly run up and hive themselves. In the morning withdraw the empty box. D. M. M., Banff.

PRINTER'S ERROR.—The "printer" has been at it again! He has given us two new names in literature, "Merve" and "Shirley" (see p. 392). Of course, I wrote *Meare* and *Thorley*. Again, on page 388, he has made me speak of having a cure "affected." The *effect* sounds odd!

THE SEASON IN ROSS-SHIRE.

A GOOD REPORT.

[6464.] While from my point of view the past season was a rather good one, in some cases bees—or their owners—have done badly. Speaking for the immediate neighbourhood, it was noticeable that few colonies completed more than a single rack of sections. Swarms did remarkably little; in one instance an early June swarm gave no surplus whatever—just through the initial error of hiving on twelve frames. In most cases failure was credited to the unseasonable weather of May, which in the case of colonies wintered on scanty stores so retarded progress that the early season was practically lost. Personally, I was fortunate in having several colonies in double-storied hives; these were progressive all the time, and became so strong in early summer that I was enabled to divide and sub-divide without materially reducing the yield of honey. The strongest was divided into three, the parent stock yielding 160 lb. of surplus—mostly in extracting supers.

The young stocks were in excellent shape for the weather, but an unfortunate mishap proved fatal to all hopes of surplus from that source. Of those worked for comb-honey one only gave over 100 lb. of surplus, although two others were not far short of the three-figure mark; indeed, they went a bit beyond it, if I were to count in the extra brood boxes of honey, but these were placed on top of original brood-nests as "feeders" of the most approved type.

I had no trouble with swarms this season until on a certain day during the fourth week of July, when three came off within a few minutes of each other. As by that time all spare hives were occupied by artificial increase, I could do nothing else than put back the wanderers on "starters," with supers replaced above, the removed brood-frames being shaken free of bees and placed above young stocks I was building up for the heather. This worked very well. The swarming fever was effectually checked, while the doubled colonies gave an excellent selection of sealed brood when preparing for heather. The quest of this precious crop has been rewarded with but scant success for some years. The dark clouds that yearly cast gloom over the majority of August days had no silver lining for the unfortunate moorman. With each successive campaign everything seemed darker still—except the supers, and these were invariably light enough, in all conscience. This time August opened favourably, but the inevitable rain quickly brought down the temperature, along with our awakened

hopes, and it seemed a sure thing that the heather must yet again prove a failure, if perhaps less emphatic than in recent years. I know at least one bee-keeper who, growing weary of waiting, removed all supers, running his unfinished sections through the extractor, and closing the bees down for winter by the last week of the month.

Fortunately, I was still faintly optimistic, and hesitated about taking such extreme measures, but as supers were almost deserted, I reduced nearly all to a single rack. The season has been one of surprises. The final and most pleasant was the unlooked for brilliant weather that marked the close of the season. The removed supers had to be replaced in a hurry, and in some cases a third added. The good time lasted just five days. Sunday, September 2, was the best bee-day of the season; it was also the last. With such a late flow, there was naturally more brood-nest storage than would otherwise have been the case, but the queens were not crowded out by any means; in some hives brood was found in second frame from the dummy. None gave more than 20 lb. of pure heather, but as practically all unfinished clover sections were completed at the heather, and much of the mixture sold at 1s. per lb., I have every reason to be satisfied with the season's work.—J. M. Ellis, Ussie Valley, N.B., October 10.

POLLEN-CLOGGED COMBS.

HOW TO CLEAN THEM.

[6465.] The question of what to do with pollen-clogged combs is continually being asked by readers of the B.B.J. Personally I am deeply indebted to your correspondent, "D. A. V.," for the advice given in B.B.J., April 13, 1905. Here, bees gather pollen every month in the year, and all combs are so filled with pollen as to be practically useless after the second season, oftentimes after the first.

For your inspection I am sending herewith a comb, half of which has been freed from pollen. I found getting the pollen out entirely by syringing took rather too much time. I soak the combs in water for three or four days; this softens the pollen, and the syringe quickly does the rest. It took five minutes to syringe the pollen out of the half comb sent (part of the time was occupied in seeing that a four-year-old assistant didn't fall into the river).

On July 6 I had two swarms, which united of themselves. They were hived on two fully worked-out combs and eight frames with starters, a rack of sections with full sheets of foundation being given at the same time. A second rack was given on July 15, and a third on the 27th. By August 15 they had fully filled fifty-four sections and fairly well filled the other nine. Who says a July swarm is not worth a fly? True, there is rather much drone cell built in the brood-combs, but that is a detail. I am content with the work the colony has done for this season.—Saml. Harborne, St. Buryan, Cornwall.

BEE PARALYSIS.

[6466.] I note that your correspondent "L. S. C." (page 395) has one "cap" at least that does not fit well. I refer to the one on bee paralysis. I can assure him that there was no sign of dysentery in any one of the hives affected. All hives were dry and clean inside, and the combs same, bar the slight sweating. The bees affected seemed to have all the symptoms mentioned in every article I have since seen in the Journal on the subject of bee paralysis. They were twice and thrice the normal size in the abdomen, and could not fly. Some were dragged out, others had just strength to crawl out, and would make almost an attempt to fly, but fell to the ground instead, where there would be sometimes a cluster or heap of a hundred or more underneath the flight-board with just enough life in them to show that they were alive. On opening a hive they were to be seen dotted on the hive-sides, on the floor-board, and at edges of combs, distended, but not one burst among the lot. When the stocks were practically recovered I noticed another curious thing. For weeks during the hottest part of the day those hives that had been affected seemed to be very busy at the entrances. At first I thought it was a case of "robbers." On some of the flight-boards there would be half a dozen or more captive bees at a hive, as many bees as could get round, and on it at a time appeared to be pulling and biting the captive, without it resisting or trying to get away. In the end the poor bee would be gradually bundled off the flight-board on to the ground with several bees hold of it, and when even released it flew up again, only to have the same process gone through again. A good many of these odd bees were black and hairless, and shiny as a black glass bead, and the blacker they were the more feeble they seemed. None of them appeared to be killed outright, but seemed at last to become too exhausted to fly up again, and so died. Nearly all the dead bees on ground (and there were many), were black and shiny. It was certainly not a case of "robbers."

I should like to ask our friend "L. S. C." if he has tried the plan he mentions (page 395) as to placing alternately frames with starters only between combs full of

syrup for bees to winter on? To me the idea seems like inviting disaster. His idea as to covering foundation in saw-cut with paraffin wax seems one better; but why have a saw-cut at all? Why not use solid top-bars and fasten foundation on with molten wax? I have used thousands in this way, and only had two or three top-bars give way, and these contained knots.

The standard thickness for top-bar is, I think, quite strong enough, but would be better if a little wider. If a full inch or an inch and an eighth it is stronger and better, for the reason that very few brace-combs will be found between it and section-racks or next tier of frames.

May I also ask him why foundation in brood combs should be wired? I had a few wired combs in use at one time, but discarded them because I found that where the wires ran a number of cells were never bred in; therefore I lost many young bees every time. The combs I refer to were built from and on American wired foundation. I have seen the same objection to wiring raised by others at times.

Harking back to top-bars, I have had hundreds of solid topped frames, standard size, weighing, when full, from six to over eight pounds each, and not a bent top-bar amongst them, and some of them had been in constant use for ten years at east. Name sent for reference. NONDESCRIPT.

Notts, October 15.

BEES IN EAST YORKS.

[6467.] I once more send you a few notes of the bee season in East Yorkshire. They are much on the same lines as last year, only more so. Cold weather prevailed here until the last week in May, necessitating much attention to bees in the matter of feeding. I note May 24 as "the first summer-like day." I had a good swarm on May 27, and two more on June 3. It was a hot and a good honey-gathering month. But we suffered from excessive drought all the summer. Indeed from the beginning of April to end of July we had almost unbroken dry weather. Early in July the clover was useless, grazed down to the quick, and the fields brown. Consequently our honey season was of the shortest. The honey, however, is of excellent quality, as the bees worked well in the hawthorn, which I consider yields a better flavoured honey than clover, though darker in colour. I have never been able to accept the general opinion in favour of light-coloured honey. The best flavoured honey to my taste is somewhat dark. This view is, I know, heresy to most bee-keepers, but perhaps you will so far humour an old correspondent, and I am sending a sample for your opinion. I have not sent a hive to the moors this year, because of my unfavourable experience in the past to which I alluded in 1905. The bees have lately been very busy among the ivy, owing, no doubt, to the unusually mild weather. One is always glad to see this last awakening of bee energy before the winter rest. I have had about 250lbs. of honey from six working stocks, and four swarms.—WOLDBEE, October 15.

[We were glad to get sample as it clearly shows how "tastes differ" in the matter of judging honey. The honey sent is fairly good in colour and consistency, but the aroma and flavour would, we fear, spoil its chance if shown in competition with what are accepted as first-class, or even good honey. We should like to get your personal opinion on the comparison between the sample before us and some honies we have judged within the past couple of months if you should be in town, and let us know of your visit beforehand.—EDS.].

BEE-HIVES IN SHOP WINDOWS.

[6468.] Your correspondent Mr. W. J. Farmer (6460, page 406) in commenting on the hive of bees exhibited for a fortnight in the windows of the *Surrey Daily Argus*, complains of this method of treating bees. Will you permit me to point out to Mr. Farmer that in this case the bees had access to the open, a fact which was so stated in the "B.B.J." on September 20, page 376. The object of this exhibit was not the sale of honey, but educational; an article on bees appearing daily in the columns of the *Argus*. As a result, although only six weeks ago, to my knowledge several persons have commenced bee-keeping with driven bees; and, further, it has led to the formation of a bee-keepers' association for Croydon and district, the first meeting of which is announced for next week.—J. S., Croydon, October 13.

MANAGING FEED-HOLES IN QUILTS.

[6469.] Most bee-keepers use on top of the first "quilt" some few thicknesses of thicker material for warmth; and, when feeding through these many will have noticed that a few bees *will* get hanged, either by the neck or the legs. To prevent this I cut all my top quilts of a size, and with a sharp chisel cut the feed-holes through ($1\frac{1}{2}$ in. x $\frac{3}{4}$ full), so that anyone of them when on the hive would have the hole exactly at centre of frametops; but before placing on hive I lined the hole in quilts with tin. To do this we will suppose the several thicknesses of material are, when loose, a good quarter inch thick, they will when tightened up be nearer an

eighth; so cut a strip of tin six inches by two, in centre, lengthways; mark two lines an eighth apart. Then, ¾ in. from one end (and each side), cut the tin through down to nearest line; same 1½ in. from these "cuts," and so on alternately till you have four cuts on each side. The tin will now bend up into same shape as a common match-box cover. Now push one end of this bent-up tin through the holes in quilting, bend back the cut pieces each side, tap with a hammer, and you have a quilt that saves time in fixing, saves bees from hanging, and with no frayed edges for bees to be constantly teazing at. A bit of glass under the tin hole, and atop of the bottom quilt, keeps all snug when feeders not on.—NONDESCRIPT (Nottingham).

THE STANDARD FRAME.

[6470.] May I be allowed to say that your correspondent "G. S. N." (6454, page 403), may have no difficulty in getting boards 9ins. wide exactly; but is he sure that the boards which he gets without difficulty are not simply 11in. cut down to 9in. specially for him, and for which he pays extra? For my own part I cannot get 9in. boards at any timber merchant's within ten miles round. The boards sold as 9in. are from over ⅛in. to ¼in. less in width, and I do not think that the size is any different in any other district, as these boards are imported sizes.

Until the old hives were out of use it would be a very simple matter for the frame makers to supply two sizes of frame. —W. J. FARMER, October 18.

CAPPINGS OF COMB.

By L. S. C., Ilkley, Yorks.

Humble-bees for New Zealand (p. 382).—If Mr. Sladen were to communicate with local secretaries or other bee-men in suitable districts, and insert a chatty article, with blocks, in their local newspaper with a country circulation, directing that the queens be brought to these helpers, he might be able to obtain a sufficiency in a short time. Perhaps some readers might assist him in this way?

Hive Disinfection (p. 383).—"If no spores are present, the hive may be used again *almost* without disinfection." Why, of course it may! But Mr. Farmer speaks of a hive as though it could be treated differently in the bacillus and spore stages, whereas the bacilli themselves become spores when the nutrient matter is exhausted, or the disease checked. Either bacilli or spores are present, and if the bacilli do not appear—and by their works ye shall know them—then of necessity must the spores be there. If "no spores are present" the hive-body is probably free from the disease, as the bacilli do not run about like the red louse! But no one can say that a hive *is* free from spores, and it is better to err on the safe side, and thoroughly cleanse, than to take the risk implied in that word "almost."

Curing Foul Brood in Autumn (p. 384). —There is a good deal to be said for the plan of removing the bees from their combs after they have ceased breeding, and substituting healthy combs already filled and sealed.

Colour of Honey (p. 384).—If the honey of this producer is of such attractive quality, he need not worry, for it hardly needs the imprimatur of a show to help its sale. "Good wine needs no bush!" All the same, it would be well to try some of the extracted sainfoin honey in competition, for although colour must be considered when judging, it is only one of several points, and whilst awards may be made to exhibits of equal quality otherwise upon the colour point, they cannot win upon that alone.

Rendering Beeswax (p. 386).—What is the theory of the newspaper *under*, and the cardboard *over* the mould, to prevent cracking of the wax-cake? It is not quite clear from the description.

Wintering under Supers (p. 386).—If a stock were very short of stores, nothing could be better than to give it a super of shallow extracting-combs. Full, of course! If these were the usual drone-cells, the queen would not lay in them before their removal in spring was advisable.

The "Simmins" Treatment of F.B. (p. 388).—A recantation. I wish to say that, after having treated one stock with Izal for three seasons, having injected hundreds of cells during that period, having dosed and doused, and generally made the lives of the bees a misery to them, until they were more sick of the sight of the bottle than of the bacillus, the stock still has the disease!

Weight of Skeps (p. 394).—In the ordinary way, a fair rough estimate of the honey to be obtained from a well-filled skep is about half its weight, but they vary a good deal with the age of the combs. The skep, comb, and pollen, and the waste in crushing accounts for the loss. I think, however, that an ordinary skep would not contain much more than "50 lb." if it were filled barrel fashion!

Size of Drone-cells (p. 394).—Four cells to the inch measure ¼ in., or in other words, 8-32 in., not 9-32 in., as stated,

and, with regard to "fertile workers" (p. 394), it is, I think, a mistake to suppose that these occur singly. Where there is one there may be many. The irregularity in laying would be thus accounted for, considering also the probability that the intervals between laying are much longer with the worker than with the queen.

The Standard Frame (p. 395).—If Mr. Farmer can only obtain $8\frac{3}{4}$ in. boards, there is nothing to prevent his nailing a $\frac{1}{4}$ in. lath along three edges of the hive bottom. Referring to the "New Standard Frame" (p. 404), I might say that at present interchangeability is not prevented by the various modifications, but it is better that there should be only one recognised standard, and that the best. Would not the suggested painting of the top-bar with wax conduce to brace comb? Has anyone noticed that deep top-bars without the sawcut are less liable to this fault?

Wasps (p. 406).—Is not your kind correspondent in turn wrong in stating that the habit of V. media is similar to that of V. vulgaris? There are only eight British wasps, and of these seven belong to the Vespidæ. Of these seven, three only—V. vulgaris, V. rufa, and V. germanica—burrow in the ground, the other four, V. arborea, V. sylvestris, V. norvegica, and the hornet—V. crabro—being arboreal. Am I wrong in supposing that V. media and V. sylvestris are identical? I find that his wasp was at one time named V. britannica. Perhaps Mr. Sladen will very kindly put us right?

Echoes from the Hive.

Wade Court Apiary, Harant, October 8.—The past season has been an ideal one in this locality for bees. Stocks that were weak in the spring and scarcely worth saving without uniting had ample time for building up and giving good account of themselves during the honey flow. An average of 50lb. surplus per stock has been my takings, which is considered good for this district. "Golden Italians" here proved superior to the blacks in honey-gathering, both being under practically the same conditions. Also for prolificness the "Golden" at this time of year are simply crowded on ten frames, whereas the blacks are not so numerous. The weather during the last few weeks has been all to be desired, and breeding has been and is till continued in all the hives, some of those with young queens working vigorously and carrying loads of pollen, which is one of the pleasant sights to the bee-keeper, both early and late in the year.

With reference to the experience of "Amateur" (Midlothian) in JOURNAL of October 11. My experience is somewhat the same, only the strain is not identical. You can always find the yellow jackets in the hives of black stocks, and more especially so among the honey flow.—W. F.

Bee Shows to Come.

A nominal charge of 2s. 6d. is made for notices (not exceeding 7 lines) in this column, 10 lines charged 3s. 6d.; up to 15 lines 5s., which covers cost of insertion from order till date of show. Cash should accompany orders for insertion.

October 18 to 21, at Waverley Market, Edinburgh. — Honey show in connection with the Tenth Annual Edinburgh and Midlothian Industrial Exhibition. All open classes. Beautifully illustrated prospectus, price 2d., from A. Hutchinson, 15, Leith Street, Edinburgh. **Entries closed.**

October 18 and 19, at Kilmarnock, N.B.—Honey Show in connection with the annual exhibition of the Ayrshire Agricultural Society. Schedules on application to John Howie, Secretary, 58, Alloway Street, Ayr. **Entries closed.**

November 9 and 10, at Chorley, Lancs.—Honey Show of Lancs. B.K.A. in connection with Chorley Chrysanthemum Society's Annual Show. Four Open Classes. Exhibitors allowed to bring honey for sale. Schedules from W. G. Smith, Town Hall Auction Rooms, Chorley, Lancs. **Entries close November 3.**

Notices to Correspondents & Inquirers.

Letters or queries asking for addresses of manufacturers or correspondents, or where appliances can be purchased, or replies giving such information, can only be inserted as advertisements. The space devoted to letters, queries, and replies is meant for the general good of bee-keepers, and not for advertisements. We wish our correspondents to bear in mind that, as it is necessary for us to go to press in advance of the date of issue, queries cannot always be replied to in the issue immediately following the receipt of their communications.

[*** Referring to honey labels (for "heather blend"), mentioned on page 408, last week, Mr. George Rose, Great Charlotte Street, Liverpool, and Mr. E. H. Taylor, Welwyn, Herts, both write to say they stock such labels, and can supply them when required. Mr. Taylor says he keep labels for English, Scotch, Welsh, Irish, and Manx honeys.

LITERATURE (Derby).—Back Numbers of JOURNALS.—1. We have, of course, back numbers of many volumes on sale; but when you write of "wanting JOURNALS and RECORDS prior to 1903 for winter reading" it is a very tall order, indeed, considering that the B.B.J. has reached its thirty-fourth yearly volume. We think the series of articles published in the B.B.J. some years ago under the title of "Bee Papers for Winter Reading" would supply your

want, and these may probably be obtainable, if desired. 2. The pamphlets we have on hand (written by the Rev. G. Bancks) are those advertised in this week's issue. 3. We could lend your friend an Australian "Bee Journal" from our "file" copies for perusal, but we do not stock them for sale.

H. JACKSON (Durham).—Disinfecting Hives. —1. If disinfected thoroughly, according to directions in "Guide Book," it will be quite safe to use the hives; particularly as they have stood beeless for over twelve months. 2. We think you may be able to keep the honey in frames from granulating by storing them in a dry, warm place; but the bees could have kept the honey liquid far better than you can.

L. S. J. (Croydon).—We know of no later edition of Mr. Simmins' book than the one you name.

SHILLINGTON (Herts).—Varieties of Heaths.—Your sprig of heath is the true "ling" (*Erica calluna*), and is the best honey plant.

E. PORTER (Radlett).—Lantern Slides for Bee-Lectures.—The slides of the B.B.K.A. may be obtained on application to Mr. Edwin H. Young, secretary, 12, Hanover Square, London.

WILNECOTE (Hockley).—Dead bee sent is a rather small adult queen, in appearance old and worn-out. As to variety, there are very slight signs of crossing, but nothing to take note of. Your letter was mislaid.

Honey Samples.

BRITON (Bethesda).—The dark colour of sample is caused by a slight admixture of honeydew. The bees have evidently also been working on heather (*Cinerea*). It is quite suitable for marketing.

R. S. T. (Wanstead).—Sample is thin, but not at all bad in flavour. We find no "bitter taste" about it, as supposed. The peculiar taste seems to come from charlock or wild mustard.

*** *Some Queries and Replies, &c., are unavoidably held over till next week.*

Special Prepaid Advertisements.

Twelve words and under Sixpence: for every additional Three words or under, One Penny.

EIGHT dozen best quality SECTIONS for sale, 7s. 6d. dozen. CLOUGHTON, Maldon, Essex. U 4

STRONG STOCK on eight frames; home-made hive. Wells' hive, complete, 30s. lot.—PICKERSGILL, Bishop Monkton, Leeds. U 2

FINEST CLOVER HONEY, liquid or granulated, screw cap jars, 9s dozen; Sections, 8s. dozen.—H. DILWORTH, Shangton, Kibworth, Leicester. T 91

PURE HEATHER HONEY, 60 stones for sale, at 7s. per stone; also Beeswax, 1s. 6d. per lb.—HARRISON, Bee Farm, Middleton, Pickering. U 8

WANTED to hire or purchase, Lantern Slides on Bees and Bee-Keeping.—75, Latimer Street, Oldham. U 8

FINEST LIGHT-COLOURED EXTRACTED HONEY, in 7 lb. and 14 lb. tins, 8d. lb.; in 28 lb. tins, 7d. lb., carriage paid; tins free.—C. DUNN-GARDNER, Fordham Abbey, Fordham, Cambs.

EXTRACTED ENGLISH HONEY, 11s. per 28 lb. tin; sample, 2d.—DUTTON, Terling, Essex. T 46

WANTED, STANDARD FRUIT TREES, also second-hand Iron Protectors.—70, Highgate Road, Birmingham. T 96

DRIVEN BEES, 2s. 6d. the stock; Royal Sovereign Runners, 7s. 6d. per 1,000; mixed Daffodil Bulbs, 7s. 6d. per 1,000.—WADEY, Broadstone, Dorset. U 6

LIGHT CLOVER HONEY for sale, £2 16s. per cwt., packed free. Sample 2d.—COMLEY, Fairford, Glos.

FOR Sale, contents of apiary, consisting of six good Standard Bar Framed Hives Bees, healthy, abundant supply for wintering, two empty hives as above, two skep hives, lifts and crates of bars and sections, double for each hive, etc.—Particulars, apply THOS. ALLINSON, Melmerby, S. O., Yorks. T 92

PURE COTSWOLD HONEY, SECTIONS and EXTRACTED. Prices and sample of extracted, 2d. —H. SMITH, The Apiary, Woodmancote, Cirencester. U 7

FOR Sale, 2 cwts. Pure 1906 HONEY (granulated), in tins, at 56s. per cwt., free on rail at Salisbury; tins and packing included. Sample, 3d.—COOMBS, Bee Expert, Bower Chalk, Salisbury. T 99

WANTED, a few good Hives. Exchange typical young Aberdeen terrier bitch, by well-known prize dog, or poultry.—TILLING, Hessenford. T 90

1½ GROSS of FIRST-CLASS SECTIONS. What offers? —ALLEN, Tusmore, Bicester. U 1

HONEY, now on hand; guaranteed Pure English: 2 cwt. at 50s., 5 cwt. at 55s., 1 cwt. at 56s. Tins free; carriage paid.—F. W. SPRATLING, Haconby, Bourne.

CHAPMAN HONEY PLANTS.—Strong plants, to bloom next year. 2s. 6d. per dozen. Seed, 6d. per packet. — JOHN P. PHILLIPS, Spetchley, Worcester. T 98

FOR Sale, eight HIVES BEES, healthy condition, plenty of stores; several empty hives and appliances. What offers?—"G. H. S.," Old Rectory House, Brundall, Norwich. T 97

PURE NORFOLK HONEY.—One hundred 16 oz. jars for sale, £3 10s. the lot, or 9s. dozen, carriage paid; 4 dozen best Sections, 8s. 6d. dozen, carriage pair.—FAKE, Massingham, King's Lynn. T 93

CROCUS BULBS (yellow), Arabi Alpinus slips, 100 1s., free.—BRAYSHAW, Aultmore, Keith. T 83

3 TON LIGHT CLOVER HONEY, guaranteed pure, 4 6d. per lb.; quotations bulk; sample, 3d.—ALBERT COE, Apiary Hall, Ridgewell, Halstead, Essex. T 80

BEES.—Stocks on eight frames, Black English, with 1906 Queens, guaranteed healthy and perfect condition, £1; skeps, 12s. 6d.; safe delivery. Honey, light extracted, liquid or granulated, screw jars, 8s. 6d. dozen, £5 gross; bulk, 53s. cwt.—CHARTER, Tattingstone, Ipswich T 54

STRONG STOCKS of HEALTHY ITALIAN HYBRID BEES, in well-made double walled hives, well stocked with food, for sale.—Write 13, The Circus, Greenwich. T 88

1½ CWT. FINEST WHITE CLOVER HONEY, in 28 lb. tins, 14s. 6d. each, 56s cwt.; also quantity in 1, 2 and 3 lb. glass jars, 7s. dozen lbs; sample 3d.—LILLEY, Mill Farm, Dean, Kimbolton. T 77

SELL or Exchange secondhand Hives, Extractor, Ripener, Feeders, etc. Particulars, stamp.—PRICE, Expert, Stourside Apiary, Old Hill, Staffs. T 78

Editorial, Notices, &c.

BRITISH BEE-KEEPERS' ASSOCIATION

CONVERSAZIONE.

(Continued from page 413.)

Mr. Carr said he was under the impression, without knowing for certain that Americans agreed with regard to the disease not being conveyed in the food.

Mr. Reid asked whether there was any idea as to where the afflicted bees came from; did the queen in question, or the foundation used, or appliances come from abroad? It was desirable to trace the cause of the disease, and they were fortunate in having amongst them so good a bee-master as Mr. Ernest Walker to tackle the subject.

Mr. Walker replied that one of his queens was bred from a foreigner, but he could not say that she had been introduced to either of the diseased hives last summer. He knew he had only one doubtful queen.

Mr. Bernau, to whom Mr. Walker appealed as the gentleman who supplied the queen referred to, said she was a Carniolan cross.

The Chairman, in closing the discussion, said the company would look forward with interest to what Mr. Walker might be able to tell them in the spring on the subject of his experiments.

Mr. Reid, in introducing the next subject on the agenda, opened a discussion regarding the causes why the best honey does not always obtain the highest prizes, said he had not prepared any paper, but his object in bringing the matter before the meeting was that experienced bee-keepers might give the benefit of their experience to those not so well acquainted with their subject. He frequently judged at shows, and had not seldom found honey of the best quality, yet absolutely unfit for a prize, because tainted with carbolic acid or smoke! He thought Mr. Carr, one of the most experienced judges, would endorse his complaint. And if so, the very fact of bringing the matter forward would be sufficient to warn bee-keepers that at times, when the honey was not of the best flavour, it was largely their own fault. For instance, carbolic acid gave to honey a most pronounced taint. With smoke it was different, but the acid could be detected in the most infinitesimal quantities. The cause was that the offending bee-keepers used too much of it, instead of a weak solution. The effect of a weak solution on bees was far better than if it were strong, because in the latter case they lost their presence of mind, ran about, became wild, and were ready to sting anything or anyone. On the same lines, if strong smoke be puffed in the bees could not gorge themselves, but become bewildered and full of attack! As regarded carbolic he advised putting a small quantity in a bottle of water and when well shaken up, allow the sediment to settle down, and pour the water off. A cloth saturated with the liquid and put on top of the frames would be sufficient to send the bees down, and intimidate them more than if the cloth were soaked in pure carbolic acid. Then with regard to smoke. All sorts of materials were used for smoker-fuel, but when using the smoker we must consider whether the smoke given off would be of a foul or agreeable odour, because much depended on that. Many things when burnt produced a disagreeable smell which would taint the honey and destroy its chances on the show-bench. The safest thing of all to use was pure cellulose, i.e., paper pulp which gave off very little tarry matter indeed. All substances that smouldered produced a certain sort of tar, which smoked. If blotting paper be burnt, pure cellulose would be produced, and that was best. Brown paper also was a pure form of cellulose, with a colouring matter (a mineral substance) added. But it should be soaked for a month before using; the reason being that the paper was well sized with a kind of glue, and if immersed long enough in water, although the mineral matter could not be eliminated, it could be rendered non-injurious, and a fuel obtained which burnt fairly well. One form of material (a most objectionable one) used was old carpets, which contained aniline dyes, and these volatised quickly and went into the hive. The first necessity in removing surplus was to get rid of the bees. Intimidation was formerly the only means of securing this end, but now they had the bee-escape—a useful little appliance that all bee-keepers should use—but there was some difficulty in getting the bee-escape on without stings or some crushing of bees. There were two kinds of escapes, viz., the "Porter" and the "Smith." He liked the latter best, although the "Porter" was quite efficient for the purpose. To those not familiar with these escapes he would say, supposing a rack of sections was being removed, a puff of smoke should be given on top of the rack, which should be raised very gently while the "escape" was being slipped underneath. This must be done slowly, or many bees would probably be destroyed. The best time to operate was in the evening, because by next morning the bees will have gone down into the hive, and the sections are then easily removed. The honey should then be put right out of sight and smell of the bees. It was also

useful at this time to have on hand some of those cardboard boxes made to fit sections. He hoped he had sufficiently introduced the subject for those who produced honey on a larger scale than himself to give the meeting the benefit of their experience.

Mr. Jesse Garratt thought Mr. Reid's advice with regard to the removal of honey seemed to carry them back a long time in apicultural practice. He believed most bee-keepers knew that only an infinitesimally small quantity of smoke was necessary in order to get bees to act in the way desired. It certainly used to be a common occurrence for young bee-keepers to overdose the bees with smoke; but he thought beginners should be told that only the sligtest possible use of any of the intimidants named was required to obtain complete control over the bees. Mr. Reid spoke in a quasi-complimentary way of the "Porter bee-escape." He (Mr. Garratt) thought it invaluable and indispensable—indeed, worthy of the highest praise. A complete confirmation was found in the fact of the appliance being so very largely used. He did not want to bring it into comparison with any other, and the "Smith" escape might, perhaps, be a little more expeditious, but with the "Porter" escape one did not expect to move it for an hour or two, but give it full time to effect a complete clearance of the bees. He (the speaker) did not quite understand by Mr. Reid's method of manipulating a rack of sections and the super-clearer in removing surplus. A very strong right, or left, hand, indeed, would be required to deal with the business by his method. He thought a much simpler way was to apply a moderate quantity of smoke, remove the super from the hive, and promptly put the "clearer" in position above the brood-frames, and put the super back upon it. By that means there would be no bee-crushing, although here and there a bee might be killed; and it seemed to him the quicker this process was carried out—compatible with neatness and care—the better.

Mr. Illingworth considered the "Porter" escape very effective in removing surplus. He had often put it on in the morning before lunch, and upon returning after lunch found only about half-a-dozen bees in the supers. There was no trouble whatever in using it. Daytime was the best, and he thought there was no method of application so good as that recommended by the B.B.J. and the RECORD; if closely followed, viz., raising the supers gently, and inserting at the corners a thin wedge made from pieces of broken section, then blowing in a puff of smoke to drive the bees down before lifting the super off with a twisting motion and setting it on the "clearer" and then putting the whole back on to the hive. He used hardly any smoke at all in doing this.

A speaker (whose name we did not catch) then asked what was the best course to take when there were brace-combs between the section-rack and brood-box? He had cut them by means of a string, but would never do that again, because it upset the bees very much. (Laughter.)

Mr. Bevan asked if there was any objection to the use of tobacco smoke when removing supers? When in Italy not long ago he had seen the roof of a house covered with hives, and on inquiring if he might be allowed to inspect them, his request was readily agreed to, and the bee-keeper took out a long pipe and while they were examining the hives simply gave the bees a slight puff of tobacco smoke now and then, and kept all quiet in this way. If there was no objection to tobacco it would be very convenient for bee-keepers who were smokers.

Mr. Reid recommended fine pin-wire for severing brace-combs; sawing with string would probably cause the death of hundreds of bees; the wire should also be used with care, and the severance not hurried. With regard to tobacco smoke, no doubt it would have the desired object; but, if used in quantity, it could not fail to taint the honey, and that was a most important consideration.

Mr. Carr had known scores of bee-keepers who never use anything else but their pipes when quieting the bees, therefore it was not an Italian idea only.

Mr. Ernest Walker had this year tried a new way of using the super-clearer with very heavy supers, which saved lifting the latter right off. He raised the supers slowly from the rear with a piece of section under the side furthest from himself, then gave a puff of smoke at the sides of the sections, and then, taking hold of the side nearest him, prized it up and put in the clearer as quickly as possible. This latter could be so placed under two or three racks as easily as under one.

Mr. Reid said his method was exactly similar to Mr. Walker's. He prized up the super from the rear, and then slipped in the "clearer" between the body-box and section-rack. If the latter was not quite in place, it became completely so by the operator drawing the rack gently towards himself. That could be done successfully with an infinitesimal number of bee casualties.

Mr. Garratt thought there must be a lot of bees passing through the excluder, which would be mutilated in the operation as described; to which Mr. Reid replied that he gave them time to get out of the way.

Mr. Hayes' experience was that the bees on top of the excluder found great difficulty

in getting away quickly; but he supposed that when carrying out the method explained the clearer was carried well over them until it reached the far side. Mr. Walker answered that the far side was perfectly free from bees because it had received an extra puff of smoke.

A gentleman present stated (to the surprise of the Chairman and others) that he never used a queen-excluder at all below surplus-chambers. Upon which Mr. Walker inquired whether he did not find brood in his sections? A reply in the negative brought forth the comment that the fact was extraordinary!

Mr. Herrod objected to the using of any smoke when removing surplus, because tiny perforations in the cappings on the sections would not seldom be found as a result. The best method of removing sections was, to his mind, after letting them remain as long as possible on the hive, to be up very early in the morning (an hour or more before sunrise) when nearly every rack of sections could be removed with scarcely a bee remaining in it. A little self-denial, in the shape of early rising, would obviate the difficulties encountered by many. In removing the super a slight twisting motion should be given, when not a single bee would be killed. After the last super was removed and the quilt dropped in its place the sections should be carried indoors at once.

Mr. Garratt inquired at what period of the year this should be done? A great many people liked to take their honey early in the season, and he doubted whether Mr. Herrod's method would apply equally well in the height of summer. The latter gentleman admitted that his plan was more suitable for autumn than midsummer, but the Porter escape could be used for an odd super removed early.

The Chairman thought the discussion had been useful. He had never had much trouble himself in removing supers; he simply loosened the rack, lifted it off, and laid it on the table by his side. The super-clearer was then put in position above the body-box and the rack replaced without the slightest difficulty beyond using a little care so as not to crush any bees. He had never tried the sliding-on system just explained, but suspected that the first trials would decapitate some bees. With regard to smoke, he certainly had a smoker, and it very often went out. He did not think it absolutely necessary to use a smoker. Perhaps he had quiet bees; but, in any case, he never smoked comb honey, if only for fear of contamination, but when cleaning the hives before packing down for winter, if the bees were troublesome, no doubt a puff or two of smoke must be given.

Mr. Reid, replying on the whole discussion, thanked those gentlemn who had had so much longer experience than himself for the information they had kindly supplied. One intimidant he had used for bees, which he would recommend to the attention of bee-keepers. Carbonic acid was now easily and cheaply obtainable in the form of soda-water. It had the advantage of being absolutely devoid of flavour, smell, or taste, and was therefore a most useful agent. He had used this liquid carbonic acid by means of a rubber tube, connecting a syphon of soda-water with a bottle furnished with a cork containing two holes, through one of which the carbonic acid could be made to pass out into the hive.

Mr. Herrod said that last year they had a discussion on foreign bees, and a good deal of doubt was prevalent as to the respective advantages to be obtained from them. American bee-keepers appeared to think that no bee on earth was equal to the Ligurian. But latterly another bee was being brought to notice, and Mr. Frank Benton was now (on behalf of the U.S.A. Government) on a voyage of discovery in search of a new kind of Caucasian bee. But the Caucasians tried here were found to possess very inferior qualities to the brown or English bee. One great fault was that they produced section-honey with a greasy-looking capping. He (Mr. Herrod) had reported that fault in connection with the test he had made of them on behalf of the B.B.K.A., and it was true even with the third generation of those queens. All through the various trials made with Caucasian queens the fault of these unsightly cappings had been handed down to the present season, and still remained. All the five queens received from Caucasia, which had been under his observation, gave progeny which produced this peculiar greased capping. He handed round the room for inspection a section of comb-honey taken this season at Swanley.

The Chairman said that while that exhibit was being circulated, he would send another round for inspection. It was from Mr. Sladen, who wrote explaining that he was enclosing a box of comb, the work of *apis indica*, received from a correspondent in Ceylon.

Mr. Reid, referring to the Caucasian bees, asked if the specific gravity of the honey was thinner or thicker. The "greasy appearance" of the capping was probably due to the honey touching the capping. The same would be found generally after honey had been in a damp place.

Mr. Herrod said there did not seem to be any difference as regarded the "capping" by Caucasian bees, no matter what the atmospheric conditions were, as all the sections taken had the same fault, and it was the same in the cappings in frames of body-boxes.

Mr. Carr begged to be excused for intro-

ducing the subject of cleaning pollen-clogged combs, regarding which there would appear in the following issue of the B.J. a letter on it from Mr. Harborne, of Cornwall, whom many present would remember. That gentleman had been much troubled with pollen-logged combs, and he (Mr. Carr) would hand round for examination a standard frame of comb which had been cut in halves by Mr. Harborne, one part of which was clogged with pollen, and might almost be regarded as worthless, whilst the other half (held up by the speaker) showed the other half of the comb after having been completely cleared of the pollen. The two halves of the comb were then passed round for inspection, and the efficacy of the treatment was admitted by those present.

Mr. Carr hoped he was not intruding on the meeting more than he ought to do, but being above all things practical, he ventured to think there were many present who did not know much about heather honey. He had, therefore, brought samples (received at the B.J. office only the previous day) of honey that were extremely instructive. Many of our southern bee-keepers did not know what real heather-honey was, in the proper sense of the term, as understood by bee-men who produce that class of honey for sale in large quantities. There was the *Erica cinerea*, or bell heather. But that was not heather honey at all, as the bee-keeper regarded it. The real heather honey — so highly valued as a table luxury—was from the common "ling" *Calluna vulgaris*. There was also a difference in the colour of honey gathered from the same variety of heather, i.e., *Calluna vulgaris*. He (the speaker) then produced two samples of honey, both from "ling," and both from Scotland, and he hoped the company would mark the difference in colour between them. The darker one was the real Scotch "ling" honey from the northern Highlands of that part of the kingdom. The lighter-coloured sample was also a very good "ling" honey, but not the equal of the other produced in the north of Scotland. The aroma of the latter was splendid, the true odour of the Highland hills, while the light sample came from the south of Scotland. He had also to show the meeting another "ling" honey, but it was a mixture, forming a nice heather blend. It came from Bro. Colomban, and was sent from Buckfast Abbey, South Devon. He hoped that by comparing the aroma and flavour of the specimens he had submitted it would prove an instructive lesson to all, as enabling them to understand what Scotch Highland heather honey was, for it was considered by Scotchmen and others to be the best honey in the world. Mr. Carr also showed another sample of heather honey from *E. cinerea*, the virtue of which had been completely spoilt by honey dew.

Mr. Bernau produced a specimen of heather honey from *E. cinerea*, not mixed with that from any other source, because nothing else bloomed where the bees responsible for it were located. It was of pleasant flavour, had a good aroma, was very dark, but beautifully clear; at the same time it was very thin, and not comparable to the consistency of Mr. Carr's exhibits. Many people thought that heather did not yield much honey, but in his district he obtained a fair quantity.

Mr. Carr said that honey of good quality mixed with that from *E. cinerea* made an excellent heather blend; but honey from *cinerea* alone was another article altogether. As a blend with a thick honey (a good clover, for instance) the combination was extremely nice.

Mr. White was sorry it should go forth that there was only one place from which good heather honey could be obtained. There were a great many places in this country in which heather was grown. This class was supplied from the southern parts of England, the Midland Counties, Surrey and Hants, and although perhaps it was not of the same consistency as that of which they heard so much from Scotland, still it was a honey appreciated by the public, and at some shows. Honey from Surrey heather had taken first and second prizes; so that he considered it a pity that the Scotch heather honey should be vaunted as the only satisfactory honey of that type. Besides, a great deal turned upon taste in such a matter. He knew people who came year after year to the Crystal Palace to buy heather honey that had been obtained in Surrey.

(Conclusion of Report next week.)

Correspondence.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

**** In order to facilitate reference, Correspondents, when speaking of any letter or query previously inserted, will oblige by mentioning the number of the letter as well as the page on which it appears.*

NOTES BY THE WAY.

[6471.] *The Honey Shows of 1906.*—The last of the honey shows for the present season has been held, and the competitive spirit laid to rest till another year, not without leaving, I fear, the trail of the serpent rankling in the breasts of some who

still think they ought to have received a share of the awards. I congratulate Mr. Seymour on attaining his heart's desire, the "Challenge Cup." He has fought valiantly for it, and in the opinion of some bee-keepers should have won it outright at a previous show.

As a yearly exhibitor at the "Dairy" since its establishment (till this year), I know the feelings of bee-keepers have been very frequently and freely expressed as to the fairness or unfairness of honey merchants exhibiting at this show. My own opinion has been expressed before in the B.B.J., and to show my disapproval of such exhibiting, I have boycotted such firms, so far as regards placing my orders for bee-supplies with firms who were not competitors on the honey-show bench. I write thus in reply to your correspondent "Showing" (6449, page 394) and also to "A. E." (6455, page 404). To the latter I would suggest a few visits to local honey shows as a preliminary before competing at the larger shows, especially those held in London. Take the class for light honey at the recent Grocers' Exhibition with 48 entries (it might easily be 58) and only 5 prizes to be awarded among the 48 exhibits. Can he hope to win except he has some extra special stuff? Again, should his exhibit be staged in the last half-dozen lots, how are judges, who have the mixture of all the previous tastings, to be able to discriminate as to the extra quality of the last few lots if shown as strained out from the combs or from the extractor? No, our friend "E. A." must improve its appearance and also its consistency; it must be brighter and clearer and thicker than the bees store it, or you will not catch the eye of the judge. You may call this "faked" honey, but I beg to remind budding exhibitors that if they will attend the next "Royal" show (where the honey department is practically the show of the B.B.K.A.), so soon as the show-yard is entered they will find every kind of exhibit "faked" throughout the whole show, i.e., improved in some way on its original. The live stock of all kinds (even the swine that have wallowed in the mud) are washed clean, and their natural coating of hair brushed and combed till it shines. Even the machinery has its cast iron parts painted with "silver steel paint" to give it an advantage over its original colour. The vehicles, too, have every crevice and wind-crack carefully filled with putty (or a substitute) before painting to hide up these little matters; otherwise no "medal" will be gained by the makers. The working machinery is always in the hands of the firms' best mechanics; shearing machines in the hands of experts look so easy to guide over the sheeps' backs. I have been an interested showman over forty years, and in every striving for the mastery I have seen the successful ones following "The Tarsan's" injunction to "so run that ye may attain." Have we not seen the onion-grower making the necks of his "show onions" small by tieing the said necks round with a cord, and those same onions' necks dressed with white of egg to tidy up any little raggedness which may show itself? Show potatoes washed in water containing gum arabic and carefully dried in the sun to give them a clean, bright appearance when staged on the show bench, and in nine years out of every ten these "improved" vegetables take the first prizes. These latter are not my exhibits (I have discontinued vegetable and flower-showing for over twenty-five years). I only give them to show that in every exhibition the winners show their very best and if possible "improve" on their very best productions. Who among bee-keepers of the older generation does not remember Mr. Cowan's ingenious "honey ripener," as shown at South Kensington a quarter of a century ago? No doubt this appliance would so thicken the extracted honey of those whose produce is poor on that point, that they may win a first in 1907 if good on all other points.

Live Bees in Shop Windows.—I heartily endorse Mr. Farmer's contention with regard to the cruelty to bees to be confined in a glass case in a shop window as an attraction! Humane bee-keeping, forsooth! We see other instances of cruelty in the treatment by novices of driven bees. These latter are very often only saved from a short exit—via the sulphur pit—to a lingering death by starvation!

Hives on Legs. — Anent the letter of "A. H." (6461, page 406). I myself consider hives on legs far preferable to several hives placed on long strips of timber, When manipulating a hive on a long stand on which several other hives are resting, it is possible that a slip may disturb the whole lot and give trouble to neighbours. One cannot be too careful in these days of "compensations."—W. Woodley, Beedon, Newbury.

USEFUL POINTS IN BEE-KEEPING.

[6472.] *Making the Most of the Season.* — In reply to "L. S. C." (page 396), reference to "B.B.J." of July 12 (page 272) will show my method of obtaining early sections, with extracted honey to follow. I have all sorts of hives, and have tried all plans of honey-production, but I like the method therein described better than any other; firstly, because both sections and extracted honey can be

secured from the same hive; secondly, because there is hardly ever any desire to swarm while a queen has the use of so many as nineteen frames; thirdly, at the end of the season one has ten good frames of comb, which may be utilised either for driven bees or for use next year. In this way the brood combs are renewed every year if the district is foul broody. The doubling-box is an exact duplicate of the bottom-hive, and may be used for an artificial swarm with a makeshift floor-board if desired.

Age to which Queens Live.—I notice with surpise Mr. Doolittle's remarks on age of his queens (page 387). It may be right in America to keep queens three to five years, but young queens are to my mind absolutely necessary in this country if "spring dwindling" is to be avoided.

Utilising Driven Bees.—A curious experience of driven bees happened to me recently. I ran two lots of these bees into a hive on 17 lbs. of natural stores, and I distinctly saw both queens go in. Next morning the bees seemed settled and contented, so I put on a rapid feeder containing 13 lbs. of syrup. A few days afterwards I noticed with some surprise a couple of wasps enter the hive unchallenged, whereupon I looked inside, to find only about fifty bees left, and the stores and syrup still there! It made me wonder where the others had gone to, and why they had forsaken a comfortable and well-victualled home. I have not yet been able to find out the reason.

About Wasps and Price of Honey.—Wasps have been a perfect plague here this year. A gardener told me that, fearing for some particular favourite plums and pears, he offered a reward of 3d. for every wasps' nest, and in less than a month he was able to destroy over a hundred nests within a mile radius of his garden. My grocer tells me that honey is selling better than usual owing to a short supply of jam and marmalade. It seems a pity that a sort of depot cannot be formed in each county, where small bee-keepers who have no suitable room at home could store their honey instead of rushing it all into the market at one time. Another grocer told me he had been offered 500 sections at 6½d. each by a small bee-keeper! As the price retail in all our Cheltenham shops is 10½d., the consumer does not reap any benefit, because a producer short of room or of cash rushes his sections into the market at 6½d. each, when by waiting a little he could easily obtain 8d. (and no well-filled section should be sold for less). Here is a "tip" on honey selling. Get a square biscuit tin from your grocer (costing about 8d., but I buy mine for less); cut a square piece out of one side, and put in a square of glass to fit the side. This box will hold sixteen sections. Get your village post office or general shop to place this box in the window, and offer the man a commission on every section he sells. This arrangement once started, keep him supplied as fast as required. The tins are excellent for keeping sections in all the winter, because they take up so little room on a shelf or in a warm cupboard, and they keep out all dust and insects.

Wintering Bees.—The best kind of device for a winter passage is an empty 1-lb. fig box filled with candy. After the candy is eaten, the box serves as a capital passage-way over the frames, or for the bees to cluster in. With quilts over and a newspaper spread over all, the "lift" keeps the paper tight down and excludes all draught. Moreover, if the newspaper is left higher in the centre it keeps the hive waterproof if the roof should be leaky.—EXPERT, Cheltenham, Oct. 22, 1906.

THE SEASON IN NORTH-EAST HERTS.

A GOOD REPORT FOR 1906.

[6473.] I am writing to report a very successful season indeed: I have taken over 1,000 sections, in spite of having two or three runaway swarms. My average yield is over sixty sections per hive. I have already sold all but about three dozen at an average price of 8d. per section. But, besides this, I have reserved for home use about 40 lb. of extracted honey.

I am leaving Herts to go to Teynham, in Kent, and shall be glad if any of your readers can tell me whether it is a good honey district or not. Large quantities of hops and fruit are grown there, but I am wondering will there be any sainfoin and white clover. Thanks to the hints given in the Board of Agriculture leaflet "Preparing Honey for Market," and also by "D. M. M." and others in the B.B.J., I have not had a single section damaged in transit to London and other places. I hope I shall not find much foul brood in Kent, as I have not as yet been troubled with it, and have only seen preserved specimens of the diseased cells when on a visit to Mr. Herrod's apiary at Luton. I have not allowed my hives to be examined by any expert for fear of infection being brought from local apiaries. Indeed, I should not think of allowing any examination of my hives by an expert at all unless I believed him to be thoroughly reliable and trustworthy.

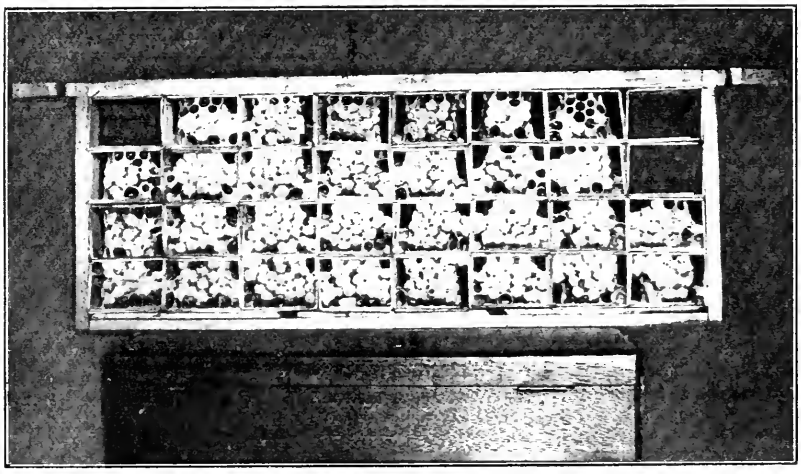
I much enjoyed my visit to Mr. Herrod's apiary at Luton, which was a splendid object lesson as to how an apiary should be

kept. I (along with many others in this county) have learnt many a wrinkle from Mr. Herrod, which has helped me to be as successful as I have been at bee-keeping, and I was very glad to know that I should be able to keep bees in Kent, and I hope with as much success as I have kept them here.—(Rev.) HERBERT NEWMAN, October.

MINIATURE SECTIONS.

[6474.] If this subject has not already been tackled and exploded, perhaps the results of an experiment I carried out this summer may be of interest to readers of the B.J. The object of the experiment, apart from that of amusement, was to endeavour to find out if it were practical to get comb and extracted honey made up in a manner suitable for retailing in tea-rooms, etc., at 1d. per section or jar. I notice all sorts of jam, etc., is successfully retailed in this fashion and possibly honey also, but I have not yet heard of it.

Jam is put up in small glass jars, and ten-elevenths of these jars will hold about 1 lb. of honey; so, on working out, if honey is put up likewise, it will give 8½d. per lb. to the honey-producer, and that for the honey only, as jars are always returnable. Whether this is a possible market for honey may be left to enterprising retailers to decide. On the other hand, with regard to sections, from the enclosed photos can be seen the method I employed to secure these miniature sections. The wood surrounding comb is from one-inch aspen slips (as used in match-box making) and is got into the necessary shape by folding it round a block and then securing with wax. Once the block is made to the right size these boxes can be turned off at a good speed. The necessary foundation is then fixed by pressure, and the boxes, after being fitted into a shallow-frame, are ready for the bees. Inside the hive they present as much work as they did outside, and the bees seem inclined to grudge the amount of extra wax required for the building out and capping of all these little squares—at any rate, I found they took the foundation from some to help work on in the others. This tendency will account for the three blanks seen in photo. However, taking it altogether, the bees performed their part very well: in fact, just as I had wanted them to do, so that I had some three or four dozen of these miniature sections to show at end of my experiment. I have still eighteen to twenty left, and if any of your readers care to have one I shall be pleased to forward on receipt of 2d. in stamps.



MINIATURE SECTIONS (IN SHALLOW-FRAME).

The expense on these sections works out at less than ¾d. per dozen, i.e., for wood and foundation. A shallow-frame (spaced at the ordinary distance apart) when full gives thirty-two sections, weighing in the aggregate about 2 lb.—that is an average of 1 oz. each. Tenpence per dozen is obtainable for these; and here again the question of return will have to be closely looked at by the honeyman.

These are the principal details of what I thought was a very interesting experiment, and if you wish to know anything further I shall be very pleased to send a "note" of what the experiment has taught me.

I enclose — for editorial acceptance — three finished sections and a blank, along with the photos already referred to.—R. N. ROBERTSON, "Spearhill," Tayport.

AMERICAN AND COLONIAL PAPERS.

EXTRACTS AND COMMENTS.

By D. M. Macdonald, Banff.

"Red Clover Bees": An Exploded Myth.—We have heard a good deal in the past about "Red Clover Bees," but I never believed in their existence. Here is what the *Canadian Bee Journal* says on the subject:—"Candidly, I don't take any stock in the phrase. In an apiary this year just as many blacks and Carniolans were on the red clover bloom as were of the Italians; and, judging by the empty supers, each race obtained the same amount of nectar from the blossomes. Personally, I believe that one race will work just the same as another on red clover (same seasons)." The editor of *Gleanings* has this also to say:—"There are many who question whether the honey bee, no matter what the strain, ever got any honey from red clover. A great deal depends on the locality, much on the strain of bees, and everything on the character of the season, whether bees work on red clover or not. When we are asked whether we will guarantee that one strain will work on red clover we always reply in the *negative*. All we can honestly say is that they will work on red clover if any strain will, and even then only when conditions are favourable." Thanks! This year I notice an almost entire absence of bees in a field with a most luxuriant growth of *white* clover. The flowers were of an abnormal size, likely on account of the nature of the soil and heavy manuring. Not a bee visited those splendid beds. I notice, too, that when worked on such heavy growths yield dark nectar. Less luxuriant pastures supply the very finest clover honey.*

Exchanging Hives.—Mr. J. L. Byer, in *Canadian Bee Journal* says: "Mr. Hutchinson equalised his stocks by changing hives around and placing an overstrong stock on the stock of a weak colony, and vice versa. While he changed a large number around thus, it is gratifying to note that no queens were lost—something I have been always fearful of when practising the plan." This may show that others practise what I recommended on page 117, August RECORD, and that I did not invent the plan. Indeed, it is a practice handed down from hoary antiquity. Bonnar gives it as one of his modes of reinforcing bee hives: "Exchange hives about 10 a.m., when the bees are busy at work (and presumably when there is a heavy flow on), placing the weak hive where the strong one stood. All the bees out in the field will on their return go into the weak hive and unite peaceably with its inhabitants. Upon this plan scarce one out of twenty will fight." Indiscriminate mixing up is not, however, to be recommended.

Ventilating Supers.—Several complex inventions to secure this have lately been recommended, but I would have none of them. I wrap up as warmly in summer as I do in winter. Mr. Root takes the wiser course when he advises warm wrapping up of surplus chambers:—"I should like to place the strongest emphasis possible on the value of top protection against both heat and cold. I verily believe the time is coming when not only the top but the sides of all comb-honey supers will be protected by an extra shell or wall, and in addition some form of packing between."

Working for Profit. — I am at present much interested in the subject of improvement of stock. The leeway to be made up is vast. My own surplus varied all the way from 100 to what I would set down as 33 per cent. Here is a similarly varied report from Texas:—"In an experimental yard of twenty colonies, one gave 245 lb. surplus, four averaged 160 lb. each, ten gave 90 lb. each, three 60 lb. each, two 15 lb. The difference in surplus stored was due to the queens more than any other condition. The colonies were all treated alike, and had the same chance. I knew the queens of each colony, and the most prolific queens had the most populous and prosperous colony, and produced the most honey. If all queens had been equally good the surplus would have been over 5,000, instead of 2,000—or a gain of 3,000 lb. The selling price was 180 dollars. At the same rate a gain of over 280 dollars would have been made." Figure again what the produce would have been if all had been equal to the poorest stocks, and then judge if scrub stock pays.

From Cuba:—"The best strain of bees for Cuba, I think, are the hybrids—first, last, and all the time. Italians clog the brood-chamber too much with honey, to the detriment of brood-raising. Of course, we require Italians to have hybrids. Our bees here run to blacks very quickly; not, I think, because, as some suppose, that the black drones are quicker on the wing than the Italians, but because to every Italian drone you can find in Cuba you will find one million black ones." And yet some look upon the blacks as of no account!

The Top of a Section.—"I have always been accustomed to see sections" — says J. A. Green—"with the lock-corner down, and it came as a distinct surprise to me

* We are glad our friend, "D. M. M." has taken up this question, and right here to use an American phrase. It may be well to say we did our best to "explode" the myth referred to, over twenty years ago in the *Bee Keepers' Record*, wherein will be found what we deem reliable proof that the so called longer tongue of the ligurian bee was little more than nonsense. That worthy and reliable Scottish bee-man, the late Wm. Raitt, who had practical experience of the subject, judging from the evidence we refer to, called it an exploded fable at the time, and the same verdict is apparently now arrived at across the Atlantic, W. B. C

when another bee-keeper asked me in sober earnest, Why I put my sections in the supers upside down? It seemed he had been always accustomed to the other way." Well, that is just my experience, too. I think placing sections with the lock-corner up is the correct plan. I don't know if I have any other than a woman's reason:—"I think it so, because I think it so," but I certainly look on it as the natural position. I wonder if others here take a contrary view?

Queries and Replies.

[3423.] *Insect Nomenclature.*—I send for editorial examination an insect enclosed in a match-box, and will be very much obliged if you would give me through your "Query" column information as to its name, order, family, genera, species, and variety. I should also like to know what it feeds on, its habits, life-history, habitat, etc. It is known here locally as the "Jasper," and is found by colliers in the coalmine, most probably being taken underground in the foreign timber, which is largely used in the coalmines here. It is principally found in the French timber between the bark and the wood, though the loud hum of the flying "Jaspers" is frequently heard in warm places underground, where work is not being carried on. They sometimes bite, when the place swells slightly. When held by the tail they will hold suspended a piece of wood many times their own weight. This specimen was alive when taken, but died, I suppose, from starvation. It has a remarkable ovipositor, but I am afraid some of its legs have got torn off.—H. Samways, Maesybont, Carmarthen.

We forwarded specimen to our entomological contributor, Mr. F. W. L. Sladen, who kindly replies as follows:—The insect sent is *Sirex gigas* and belongs to the family Siricidæ of the order Hymenoptera. The Siricidæ are closely related to the saw flies; the larvæ feed on the wood of trees, and in some places on the Continent, where they are very common, they do great damage to fir trees. In England, *S. gigas*, though widely distributed, is never abundant, and the majority of specimens come from imported timber. The female is armed with a wonderfully perfect wood-boring apparatus, by which she is enabled to bore holes in the bark of trees, and so to lay her eggs in the wood. The insect being often about 1½in. long always attracts attention when found.

[3424.] *Honey from the Veldt, S. Africa.*—I have forwarded by my friend, Mr. Cosgrave, a small bottle of our "Cape" honey for your opinion as to its merits, etc. It was gathered from the veldt or country scrub in the neighbourhood by domesticated wild bees—specimens of which I hope to forward on another opportunity. I have been a subscriber to your paper for the last three years, getting it from a firm of booksellers in Cape Town. I have about 150 hives, but have not given them the care, time, and attention they should have. Thanking you in anticipation for your opinion on the honey sent.—W. J. H. W., Cape Town, S. Africa.

P.S.—I must apologise for not sending you a clearer sample; it was just dipped out from bulk with the spoon.

Reply.—We were very pleased to get your sample, and equally so to have a personal interview with your friend (and his friend, Mr. G. D. Rider, of Johannesburg) who brought it over. The flavour is "a bit coarse," so to speak, and is, of course, quite new to our palate; but it is a fairly good honey, and quite suitable for table use. On the other hand, it would not compare favourably with our first-class home-grown honey. We showed a sample of the latter to your friends, and think they will confirm our word on this point. We will be very pleased to hear from you again.

[3425.] *Utilising Unfinished Sections.*—At the end of each season I generally have left on hand a large number of unfinished sections. In explaining how this result is brought about, I may say that when the honey flow is reaching its close, and I have a rack of sections on and nearly finished, my usual practice is to put another rack of 21 sections underneath the almost finished one, although I am morally certain that there will only be mere spots of honey in the sections given last at end of season. What I wish to ask you is, therefore, would it be a better way to remove only five or six finished sections in the original rack and replace them with new ones, so that every one would have a chance of being finished at end of year? I have suggested this latter plan, but have been told, in reply, that when you remove single sections in that way the bees are apt to either cease working in the rack altogether or carry all the honey in it down. I lost dozens of finished sections this year through bees emptying cells during the cold, wet spell we had in the North during July and August. An answer in B.B.J. will oblige.—A. Black, Stirling, October 22.

Reply.—It is a well-known fact that so soon as the honey yield begins to fail and nights are cool, bees will not only cease to store any remaining honey that is gathered in surplus-chambers, but will carry down the contents of unsealed sections into the brood chamber below. The remedy for this trouble is, first, to keep section-racks and all surplus chambers as warm as possible by adding to the wrappings in order to conserve the warmth; second, when more than one rack of sections is on a hive the bee-keeper should go over the lot and take away those least filled, or containing very little honey, and close up the remainder so as to leave as little "filling" as possible to be done. This and extra wrappings will help very much in removing such trouble as our correspondent complains of.

[3426.] *Young Bees and Grubs Cast Out of Hives.*—Will you kindly say in next Bee Journal why bees at this time of the year

throw out young grubs in an early stage, and also after they are almost ready for hatching as fully-developed bees? They have done so with me both this year and last, and the young bees cast out are too small in size to be drones. I have been feeding my stocks well this year, so that I know they have plenty of food. The queen is three years old. I had them in a box until this year, but they transferred themselves to a frame-hive placed below about last Whitsuntide.—Thanking you in advance, I send name, and sign "A Novice."

REPLY.—There has been a good deal of trouble this year similar to that mentioned above. Young bees have been cast out or have ventured forth in good numbers only to die on the ground. It can only be accounted for by supposing that the progeny of the mother-bee in such hives is not strong or vigorous in constitution, owing to faulty queens. Trouble of that kind rarely occurs in large apiaries managed by skilled bee-keepers, and it is most difficult to explain from a distance.

Notices to Correspondents & Inquirers.

E. E. Smith (Weston-super-Mare). — Show Regulations.—It is clearly understood by all exhibitors—and, as we think, by the great majority of bee-keepers—that the confectioners' and also the grocers' exhibitions held annually in London are different from ordinary honey shows. In the latter, all honey staged must be produced by the exhibitors' own bees, but no effort is spared by the directors of the exhibition first named to make it known that their competitions are not confined to bee-keepers, but are mainly for tradesmen who may or may not be bee-keepers at all. Our readers can labour under no misapprehension on the point, it being clearly so stated in print on every occasion when the need arises.

E. LOVETT (Great Yarmouth).—Granulation of Honey.—There is no process known as "refining" extracted honey, by which term we assume is meant re-liquefying after the honey has granulated or become solid. All pure honey will granulate, after keeping for some time, and may, if desired, be brought to its original liquid condition by immersing the vessel containing it in hot water for an hour or two.

F Champion (Godalming).—Bee Literature.—We are sending on your letter to our correspondent "Literature" (p. 419), who will no doubt write you in reply thereto.

R. J. T. (Thirsk). Labels for Heather Honey.—We are not sure who stocks labels as pattern sent, but will endeavour to find out for you and report later.

Honey Samples.

THOS. WILCOX (Montgomery).—Yours is a very good sample of Welsh heather honey. It is entirely from "ling," Calluna vulgaris, and should stand well on any show-bench.

INQUIRER (New Forest).—Honey sent is an excellent specimen of heather produce. It is from the true ling, and the "air bubbles" you complain of cannot be avoided; besides, they are no disadvantage in honey of that class.

Special Prepaid Advertisements.

Twelve words and under Sixpence: for every additional Three words or under, One Penny.

FOR Sale, four stocks bees, bar-frame hives, well supplied stores, guaranteed healthy, 30s. each; also White Wyandotte cock, splendid laying strain, 6s.—HEMMING BROS., Standlake, Witney. U 16

CLOVER, HONEY, guaranteed pure, 28 lb. tins, 14s.; or would exchange for poultry or appliances.—MATTHEWS, Great Rollright, Oxon. U 13

FOR Sale, contents of Apiary, consisting of seven stocks of healthy bees in bar frame hives; "Guinea" Extractor, new this season, with cog gearing and lids; six dozen drawn out shallow combs, and all other accessories.—Apply S. ECLES, Clanfield, R.S.O., Oxon. U 12

HALF TON HONEY, finest quality, 28 lbs. 14s., 1 cwt. 53s., 2 cwt. and upwards at 50s. Sample, 4d.—OWEN BROWNING, Ashley, Kingsomborne, Hants. U 21

HONEY EXTRACTOR wanted, "Cowan" preferred; must be in thorough working order.—W. A. KENNEDY, Powbank, Prestwick, Ayrshire. U 19

HONEY wanted; must be light in colour; sample, with price, carriage paid.—CARTER, Chartridge Green Farm, Chesham, Bucks. U 17

FOR Sale, eight dozen well-filled Sections, 8s. dozen.—A. BARBER, Comberton, Cambs. U 18

PRIZE WINNING LIGHT COLOURED HONEY for sale, in 1 lb. screw-cap bottles, or 14 lb. tins, also sections, cheap.—DAVID HANCOX, Deddington, Oxon. U 14

WANTED, 12 BEST CLOVER SECTIONS; state price, carriage paid.—VICAR, Rossett, Denbighshire. U 9

4 CWT. FINE LIGHT HONEY, in 28 lb. tins, 50s. per cwt. Sample, 2d.—Penfold, West Street, Epsom. U 20

FOR Sale, ENGLISH HONEY, guaranteed pure. Sample, 3d.—W. J. LAW, The Cuckoo, Ashwell, Herts. T 47

HONEY FOR SALE.—For high-class honey, in sections, glass jars, or 14 lb. tins, apply for quotations and samples, stating quantities required, to J. HOWLAND, Brampton, Huntingdon.

DRIVEN BEES.—Strengthen your weak stocks with guaranteed healthy driven bees, 1s. 2d. lb.; fertile Queens, from strong stocks, 3s.—TUCK AND CO., East Knoyle, Wilts U 11

38 STOCKS HEALTHY BEES FOR SALE, three "Wells," the rest "W.B.C." hives, well stored; owner leaving district.—NORTH, Lupton Apiary, Kirkby Lonsdale. U 10

FINEST CLOVER HONEY, liquid or granulated, screw-cap jars, 9s dozen; Sections, 8s. dozen.—H. DILWORTH, Shangton, Kibworth, Leicester. T 91

PURE HEATHER HONEY, 60 stones for sale, at 7s. per stone; also Beeswax, 1s. 6d. per lb.—HARRISON, Bee Farm, Middleton, Pickering. U 8

FINEST LIGHT-COLOURED EXTRACTED HONEY, in 7 lb. and 14 lb. tins, 8d. lb.; in 28 lb. tins, 7d. lb., carriage paid; tins free.—C. DUNN-GARDNER, Fordham Abbey, Fordham, Cambs.

EXTRACTED ENGLISH HONEY, 11s. per 28 lb. tin; sample, 2d.—DUTTON, Terling, Essex. T 46

PURE COTSWOLD HONEY, SECTIONS and EXTRACTED. Prices and sample of extracted, 2d. H. SMITH, The Apiary, Woodmancote, Cirencester. U 7

CHAPMAN HONEY PLANTS.—Strong plants, to bloom next year, 2s. 6d. per dozen. Seed, 6d. per packet.—JOHN P. PHILLIPS, Spetchley, Worcester T 98

Editorial, Notices, &c.

BRITISH BEE-KEEPERS' ASSOCIATION CONVERSAZIONE.

(*Continued from page* 424)

After a general conversation on matters that had been brought before the meeting, Mr. Paul, speaking on the matter of pollen-clogged combs, said he had found a good remedy was to soak them in water for a little while and then turn the garden hose on them. He simply held the frame in front of the rose, when the pollen was readily washed out.

Mr. Reid, in introducing the next subject, viz., "Feeding in Winter," said he was so much encouraged by the amount of information that had been forthcoming as regards feeding bees in winter that he would like to discuss the subject for two or three hours if time permitted, which it did not. His idea in putting it forward for discussion that evening was that many bee-keepers might be in the position of shortly having to feed their bees. There had been a number of inquiries in the B.B.J. with regard to this particular question, therefore anything that could be elicited in reference to it would be helpful. Firstly, what should they be fed with? Naturally, honey would be the best food, but that would hardly pay unless the bee-keeper had refuse honey—that is, honey that could not be marketed. The first food used for bees was grape sugar, on which the Romans used to feed their bees in the winter, although there was evidence that cane sugar was known to them. Columella 2,000 years ago wrote a Latin treatise, in which he explained how to feed the bees. He recommended that grapes or figs be saturated in water, and the solution run off into a split reed, which was to be pushed into the opening of the hive. That was a solution of grape sugar, and he mentioned it to prove something that had been discussed in Germany. Some people believed that grape sugar was not a good food for bees, but there was the fact that the Romans used it successfully; of course, they had a better article in cane sugar. Glucose had been used for making artificial honey, but it was a dead failure, and although a dealer might make a little profit one year he would very likely lose the whole of his honey trade during the next twelve months. But with one-fifth part of cane sugar in a syrup of glucose, a liquid was obtained which would not crystallise so easily as a syrup made of cane sugar entirely would. The colder a solution was the more easily it crystallised; they would find in the excellent guide books that a certain quantity of sugar added to a small quantity of water when warm remained liquid, whilst when cold the mixture did not. Some bee-keepers might think that the advocacy of syrup as a winter food was wrong in principle, they having been told that bees ought not to have syrup at that season; but there were exceptions to all rules, and when cases occurred where bees were starving, they must not rely on saving their lives with candy alone. Syrup in winter, it was supposed, caused a loss of bee-life through chills. For a good many years he (the speaker) had fed his bees in the cluster, and he never dreamed of using candy. He passed the syrup through a hole in the quilt, and managed to do it without chilling them. When he found them short of supplies he would pass a tube down through a $\frac{3}{4}$ in. hole, and let some warm syrup go into the middle of the cluster. The bees would not leave the cluster, and if they were starving it was necessary to give them the syrup quickly. The general plan was to put candy on top, but care must be taken to choose the weather for doing that. The bees might be at the starvation point at a time when it was not possible to let them out. He recommended that a piece of glass should be put on the opening in the quilt, and the box of candy over that, and then the glass could be slid off gently when feeding was about to commence. With regard to the making of candy referred to in the B.B.J., some of it contained a good deal of honey. It was desirable to give the bees a food from which they would derive the most benefit. Besides, honey had the advantage of keeping the candy moist, and caused non-crystallisation, partly because it prevented the cane sugar from crystallising. The question of when to feed bees was so wide that he would not venture to go into it. Conditions varied so very much that it would be impossible to lay down any general law, but he hoped they would be able to have the advantage of the experience of the many gentlemen present thereon. Hundreds of stocks of bees had been lost this year. Mr. White, Secretary of the Surrey B.K.A., would confirm that as regarded his county. The spring was very cold, and the bees could not get out to obtain fresh stores. The result was that those who did not feed at the right time lost their bees.

Mr. F. B. White, in confirmation of Mr. Reid, said that the winters of the last few years had been mild, and many people were under the wrong impression that the milder the weather the less food was consumed by the bees. On the contrary, those who had experience knew extra food would be required during a mild winter. Numbers of stocks were lost for want of this

knowledge. Every case must be judged on its peculiar circumstances, and he only suggested that bees should be fed if they required it. He recommended candy as the most suitable food. When breeding was coming forward in the spring, there were the natural stores for them, and the old bees consumed the candy.

A gentleman present here said he had always given his bees 30 lb. of food at the end of August and had never lost a stock yet in winter.

In reply to a speaker who had heard that unsealed syrup in hives caused dysentery in winter, Mr. Reid said he did not know whether there was anything misleading in the term "syrup." Molasses was sometimes called syrup; that, of course, was not good for bees because it contained potash salts. He had in mind a solution of pure sugar, whether cane or beet. He never used anything but pure beet sugar, which the German bee-keepers did also.

Upon a reiteration of the statement that liquid food in mid-winter would cause dysentery, Mr. Reid replied that he knew of no evidence to that effect.

A gentleman said that he thought Mr. Cowan's "Guide Book" laid it down that the proper food for winter feeding was soft candy, and he (the speaker) generally made assurance doubly sure by giving a cake of this in autumn, and leaving the candy on till it was consumed. He then supplied syrup food in the spring. He always understood that syrup was not suitable for winter feeding.

Another speaker asked if Mr. Reid used beet sugar of the kind supplied at cheap restaurants, to which the latter speaker said that he certainly would not go to a cheap restaurant for beet sugar. What he used was refined sugar. He was thoroughly conversant with the manufacture of sugar, and the most clever analyst could not tell whether refined sugar came from cane or beet. There was an old objection to beet sugar, because when it was first made it was sent over here as an unrefined moist sugar, supposed to be used in the kitchen only. The refining of sugar was, however, carried out to such an extent now that the coarse Demerara sugar of former days, coloured with a dye, was seldom seen. A large quantity of so-called Demerara sugar was now made in Hamburg.

Mr. Carr said he held to Mr. Cowan's declaration in the "Guide Book" in favour of pure cane sugar being used for feeding bees, believing that the author's reasons for advocating it were substantial ones.

Mr. Reid asked upon what ground that conclusion was formed, and why a pure substance obtained from one source was not as good as one from another?

Upon which Mr. Carr replied that he had no doubt Mr. Cowan could answer that question satisfactorily.

Mr. Bevan said—referring to the question of autumn feeding — beginners who bought driven bees and put them on combs or foundation generally fed them on syrup during August and September.

Mr. Reid remarked that it was a matter of general experience that syrup was used for feeding driven bees, and if it was done early enough the bees usually did well.

Mr. Bevan, in continuation of the subject, said that if the bees had the whole of their winter stores supplied in the form of syrup, unless the latter was very thick, it would during the winter be apt to ferment in the hive and create a certain amount of dampness, with the result that bees might be affected with dysentery through too much moisture.

Mr. Carr stated that there was ample evidence in the pages of the B.B.J. to show that nothing of the kind occurred if the feeding was done in time. Driven lots of bees were bought and sold in thousands every year through the advertising pages of the Journal. Moreover, the same buyers get them over and over again year after year. When he (the speaker) had occasion to visit Mr. Herrod's apiary during the present autumn that gentleman was extremely busy building up stocks from driven bees.

In confirmation of this Mr. Herrod said that bees would certainly build out their combs and go through the winter well if fed on syrup in autumn, provided that the feeding was commenced early enough. If left till late he would prefer giving soft candy. He had wintered bees entirely on candy, by giving them a huge cake of it (weighing 12 to 15 lb.) covering several frames. He was bound to say that he preferred to use cane sugar for all bee-food, notwithstanding Mr. Reid's claim that beet sugar was as good. He thought that dysentery was more likely to ensue from the latter; and in fact, he himself had had experience of this. Sugar syrup must be made very thick if it was to be given to bees in autumn.

The Chairman, in closing the debate, said the discussion had been most useful and interesting. He had always been under the impression that cane sugar was best for bees, and accordingly had always used it, and had never been troubled with dysentery among his bees. He always gave to each stock a cake of candy in autumn, in order to be safe against possible loss through want of food over the cluster. His candy cake was put in a used box, in which was fitted a glass top, so that he could see when the food was finished and tell when another cake was needed. By giving candy in this way a bee-keeper

could judge of the strength of his stock, as indicated by the length of time a cake lasted in each case, and that was useful knowledge for the forthcoming spring.

Mr. Arthur Peach said, with regard to pollen-clogged combs, he would like to ask if any gentleman present had tried the Canadian system of cutting away the comb to the base or mid-rib, by which means all the pollen-clog was removed. He did not know whether that method was carried on in England at the present time. He had done it himself during his recent visit to Canada, where he was occupied in a large apiary.

The Chairman inquired of the last speaker what advantage was gained by that method over using new comb-foundation? And Mr. Herrod also asked how the residue of the pollen from the base of the cells was removed?

Mr. Peach replied that the knife was so made that it dipped into the comb and cut all away down to the mid-rib, removing every bit of the pollen.

Mr. Herrod thereupon asked, Where was the value of the system? The queen would begin to lay more quickly in comb built on new foundation. Not only so, but he thought the bees would probably bore a tremendous number of holes in the mid-rib if they built on that. He now spoke of what occurred when he tried the process.

Mr. Peach said that one advantage was that in cutting away the pollen from the foundation the cocoons were destroyed, the knife being made in a special way to effect that purpose.

At this juncture a gentleman present again reverted to the subject of clearing supers, and said that when he first started using the bee-escape there was much complaining that they did not attain the end in view, because possibly a brace-comb might be built right over the entrance to the Porter escape, or perhaps some honey from the comb running into the escape would prevent the bees passing out. His own practice was not to raise the super up and slip the clearer in between, as some of those present did. He lifted the super right off, and set it on the clearer, placed at hand to receive it, then put the whole in position so that the edge of the clearer just rested on the alighting-board of the hive, and the bees would pass out below and enter the hive. He found that the very young bees would not so readily pass out of the clearer, when the latter was placed over the stock. He fancied the young bees felt the vibration of the bees in the stock.

Mr. Reid, wishing to avoid any misconception regarding what he had said as to syrup-feeding, desired it to be understood that he did not advocate syrup as a food for bees in a general way; but he did recommend the feeding of starving bees in winter with syrup, provided that was administered through a tube into the cluster. No doubt if syrup was exposed through the winter without covering in the hive it would ferment. He would like also to repeat that there was no difference between feeding with cane sugar and beet sugar, which were scientifically identical. He had for twenty years used refined beet sugar, and, what was more, he asserted that when anyone went to a shop expecting to buy cane sugar he would get beet sugar without knowing it. He concluded by moving a vote of thanks to the Chairman for presiding so ably over the meeting.

Mr. F. B. White seconded the motion, which was briefly acknowledged by the Chairman, who declared it a labour of love for him to do anything in promotion of bee-culture.

Correspondence.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

**** In order to facilitate reference, Corresponderts, when speaking of any letter or query previously inserted, will oblige by mentioning the number of the letter as well as the page on which it appears.*

AMONG THE BEES.

BEES, FLOWERS, AND FRUIT.

[6475.] The mutual relationship may be considered beneficial all round, with a preponderance of favours conferred greatly in favour of the bees. The destruction of the honey bee would undoubtedly prove disastrous to the flower and fruit growers, because their visits are not only beneficial, but an utter necessity. It is, of course, universally recognised that the bees supply cross-fertilisation, which is required for the proper setting and mature development of most fruits. Where grown in quantity it is not enough that a few bees should visit the fruit-bloom; they should be there in their thousands, because a flower may require repeated visits before it derives any benefit. At one period it may not be ready to receive profitably the pollen shed by the bee; at another time the bee may not have the necessary supply; and yet again, climatic influences may be at work which tends to nullify the fruits of many visits.. So, many visits are more certain than few. Instances are on record where orchardists

compelled the removal of apiaries from the neighbourhood of their fruit-farms, with the result that their crops subsequently were poorer, and the fruit not so well developed. On the return of the bees to the old location the crops became abundant once more, and the fruit growers became convinced that the bees were a blessing and not a bane.

I believe it is at times charged against bees that they puncture such fruits as grapes, and so prove destructive. Naturalists who have given the subject close study affirm that they never saw any proof of this statement, and the further assertion may be made that the form and structure of their mandibles makes the operation improbable, if not utterly impossible. The original injury is generally brought about by birds, wasps, or rough handling. Bees are seen at times lapping up juices from broken fruit, and at once set down by the unobservant as the real culprits, because it is apparent that they have been caught red-handed. But, indeed, their depredations are now considered, by those best able to judge, to do good and not evil, as what they sip hinders injury being done to other berries, so that these visits are really a blessing in disguise. On the other hand, to the apiarist it is no advantage, as he has no desire to have such deleterious "nectar" carried into his hives, because he knows its presence there would do more harm than good. If in quantity it will almost certainly lead to an attack of dysentery, if partaken of at a time when bees cannot fly freely. I would even go a step further, and attribute some of the mysterious instances of bee paralysis to the appearance in the store cupboard of some such deleterious trash.

Further, in viewing the mutual benefits it must be remembered that, although bees at times profit by a fruit-bloom flow, the bee-keeper seldom expects to get any surplus honey from this source in any appreciable quantity. Of course, it is a good spring stimulant, when weather proves favourable, but it is seldom more than that. Therefore, the contention is just that the bees benefit the fruit more than its bloom benefits the bee. The best way to convince the fruit grower that he is not a loser is to educate him to the value of bees. If he is a bee-keeper he never thinks of evicting the bees from his fruit farm; he knows better.

Lawson, writing on his orchard and his bees, over three hundred years ago, says: "Bees of all things love and thrive in an orchard. If they thrive (as they needs must if their guardian love them, and he is skilful) they will, besides the pleasure, yield great profit. Yea, the increase of twenty stocks will keep your orchard." Most moderns acknowledge that bees, flowers, and fruit go hand in hand, and that the first are an accompaniment to the last two. At times, seed-growers, cultivating large areas of different flowers, true to name and variety, for the sake of the seed, may have a little cross-fertilisation, but I believe the percentage is generally small; and, moreover, it may be brought about by flies, wasps, or other insects, or even by the winds, which are extensive scatterers of pollen-grains in such circumstances as the above.

To most flowers cross-fertilisation is a wise provision of nature, imparting fresh vigour to the individual, leading to better results. Darwin collected a large body of facts showing, in accordance with the almost universal belief of breeders, that with animals, as with plants, a cross between different varieties, or between unrelated individuals of the same variety, gave vigour and fertility to the offspring. Therefore the bees are bound to do an immense amount of good to the flowers visited. All the observations that have been made, whether scientific or practical, show that their visits are beneficial, and that in return the bee does not really rob the flower of any substance essential to its life and well-being.

Cheshire, in dealing with the relation of the honey bee to flowering plants yielding fruit, says, of the fertilisation of the strawberry: "Bees walking over the bloom seeking honey carry pollen to the stigma. Where fertilisation takes place the strawberry develops, but if it fail in part, we have there a hard, shrunken, greenish mass. Any dish of strawberries examined will give instances. Without this fertilisation no crop follows. To produce a single perfect strawberry, from one hundred to double or triple that number of independent fertilisations must be accomplished." If this be so, then we must recognise how very dependent our fruit crops are on the visits of bees. Fortunately for us who are bee-keepers, most of the flowers visited by bees bestow on them a *quid pro quo* in the shape of life-giving nectar, which, by the cunning device of man, to a great extent at least, becomes his perquisite to pay him for the care and attention he bestows on his bees.—D. M. M., Banff.

NOTES ON CURRENT TOPICS.

HIVE DISINFECTION.

[6476.] Referring to the remarks of your contributor "L. S. C." (page 418), *re* spores in hives, my contention is that in the earlier stages of foul brood there are no spores anywhere, save in the infected food, and that if we remove the frames and bees the hive is probably quite free from in-

fection—at least, it ought to be. It is, of course, best to err on the safe side and to disinfect; but, in any case, the floor-board should certainly be disinfected. I am obliged to "L. S. C.,' for pointing out, on page 419, that the width of an $8\frac{3}{4}$ in. board may be increased to 9 in. by adding $\frac{1}{4}$ in. laths. In fact, this is what I do myself, but it means more work and time. I consider that it would very advantageous to reduce the depth of the frame by a quarter of an inch, because whole generations of bee-keepers would benefit thereby and the present inconvenience would be slight, as both the old and the new size would be obtainable during the transition period.

Referring to the question of "Bees in Shop Windows" where the bees have free egress and ingress, of course, there can be no serious objection to such an exhibition. But as regards the respective objects of exhibiting bees for advertising honey or for inducing more people to go in for bee-keeping, I think that on the whole it is far more imperative to create a good honey market than to increase the number of bee-keepers under present circumstances. For instance, I am extremely surprised to find heather honey advertised in your pages at 6d. and 7d. per lb. I know Yorkshire, and I also know that the bee-keepers of Middleton and Pickering get no honey at all from the moors in some seasons. I know, too, that they get little clover honey, and in view of this I scarcely think that bee-keeping pays them at such a price. Then we have clover honey offered at 48s. cwt. Why does not some enterprising bee-keeper offer some at a 1d. a lb., carriage paid? If honey sells at all, surely it is just as feasible to ask a fair price as an utterly poor one.

A question has been raised on the subject of Italian bees entering hives other than their own. I have myself found this to be a general habit, and have no doubt that if a hive of blacks were set down in an apiary of Italians that they, too, would be distinguished as visitors to the Italian stocks.

It is clear that during the honey-flow bees do enter hives other than their own without being in any way molested. This is one way in which foul brood may be spread. Therefore, I say, keep no foul-broody stocks in the apiary. —W. J. Farmer.

NOTES FROM SOUTH HEREFORD.

[6477.] *Driven Bees.*—Though only a beginner may I say a few words in defence and praise of the "driven bee"?

Reports on the harvest in this district are very varied. While some bee-keepers have had big yields, others in their immediate neighbourhood have taken no surplus. I am among the fortunate ones, and this is where my driven bees come in. I started last autumn with two lots of driven bees. These I fed up with plenty of medicated syrup, and in the spring they turned out very strong colonies.

I supered both lots about last week in May, and on June 20 took 27 lb. of dark, though good flavoured, honey from one, and on the other was two crates of sections almost full.

My season's take was 96 lb. in sections and extracted from one lot, and 60 sections all well filled and a bumping swarm in July from the other. The swarm is doing well on seven frames and has plenty of stores. I have exhibited at two local shows and gained four first prizes and one second in five classes. I have fed up two more lots of driven bees this season and am looking forward to big things next year.

In this week's Journal's report of the B.B.K.A. Conversazione, our leading bee-men seem at variance over the question of removing surplus honey. I find the following an easy and simple plan: After prising up the super and giving a puff of smoke I proceed thus—Taking the carbolic cloth between a finger and thumb of each hand, letting it hang down in front of the hive, I remove the super with a sliding motion along, not across the frames, and draw the cloth over after it. When the super is clear of the hive I release the cloth, which then covers the frame, and hold the super over the cloth for a short while to drive the bees up among the sections. I then place the super on to the clearer, which I always have ready at hand. To replace super with clearer under it is also a very simple job. I roll the cloth back clear of the ends of the frames, farthest away from me, and place the clearer and super in position on the exposed frame-ends. One quick motion draws the cloth off, and the clearer is lowered on to the frames without a bee escaping.

The whole of the operation is only the work of a minute and the job is done before the bees know where they are. I always use plenty of vaseline on the bottom of supers, which greatly helps their removal. — Ideja, October 29, 1906.

PRICES FOR HEATHER HONEY.

[6478.] I do not very often see a copy of the B.B.J., but a friend showed me his to-day and pointed out (on page 414) a note in your issue of October 18 where "D. M. M.," Banff, says, "if he could get down to Pickering he would do his best to pickle somebody there." I suppose he means my poor innocent self, but what will our friend "D. M. M." say when he sees advertised in the same issue of the B.B.J.,

in which his wrathful comment appears, pure heather honey offered at 7s. per stone, honey for 6d. per lb. from "Harrison's Bee-Farm, Middleton, Pickering." I also notice in the first part of "D. M. M.'s" article on same page he mentions having bought a swarm for 15s. I should like to tell him that we have no such prices here for swarms, they can be had for 9s. anywhere; in fact, I never get more than 6s. and 6s. 6d. for a swarm, so that if "D. M. M." will come down to Pickering well supplied with vinegar he will find plenty of us poor Yorkshiremen ready to be pickled. We also have cartage to pay and standing room for our hives on the moors. I have no wish to lower prices for honey, as Mr. Harrison's advertisement in the B.B.J. of October 18 goes to prove, but I ask —Are we to let him do all the business? I hope "D. M. M." will reply to this last question.—W. WRIGHT, Pickering, Yorks, October 25.

LARGE TAKES OF HONEY FROM JUNE SWARMS.

[6479.] It would be interesting to readers of the B.B.J. if your contributor "D. M. M.," would kindly give us more particulars respecting those two swarms of bees mentioned on page 414 of B.B.J. on October 18, and the management thereof. It makes one wonder what was the weight of each swarm, and were they hived on starters only, or full sheets of comb-foundation, or drawn-out frames of comb? Also, how many frames did he use when hiving, and was the section-rack filled with "starters" or drawn-out combs? All these items are interesting in view of the fine results obtained.

I joined a swarm and a cast together and hived them on eleven frames of foundation, and supered with a rack of fully drawn-out shallow-frames of comb; but my two joined lots absolutely refused to work in the shallow-frame box, and on making an examination in August I found the brood-chamber blocked with honey; in fact, the queen had no room for egg-laying until I removed the frames and extracted the contents. To-day (October 24) the hive is full of bees and brood in all stages, and the bees are busy carrying in pollen, more like they do in April than on an October day.

If your correspondent "A. H." (Wavendon) has any ivy in or around his apiary he will see soon where the bees get pollen from in October. Bees appear to be working very late this year in our neighbourhood, and their present labours will no doubt be a great saving to the store-cupboard later on. S. M., Leominster, October 24.

BEE-FORAGE IN KENT.

[6480.] In reply to the Rev. Herbert Newman (6473, page 426), who writes *re* Teynham as a honey district, I may say that I know the village very well, and can safely say that there is plenty of bee-forage there. I was in the adjoining parish of Tong about the end of last May, when my father (who keeps from eighteen to twenty stocks) had some shallow-frames nearly fit to take off. Of course, the bees get a good start with the fruit bloom; following this comes turnip bloom. The farmers in this part of the country grow a lot of this for seed. After this there is the clover. I do not know if they will grow sainfoin there now as I have been away for some years, but they did not grow much before I left the district.

With regard to foul brood, I knew of two bad cases about two years ago at a place some two miles from Teynham Vicarage. I was pleased to see our fellow bee-man got such good results from his bees with sections. It is quite different to my experience. I have had a rack of sections on one of my stocks for two seasons and did not even get them drawn out. But I had a box of shallow-frames below them. Yet the stock was boiling over with bees at the commencement of each season. I do not think this is a very good honey district, especially in a dry year like the present one has been, for the clover and the limes are about the only forage we get, and these dry up so quickly when there is no rain. The clover is in bloom now, and I saw bees working on it yesterday. — T. W. S., Middlesex, October 27.

HIVING SWARMS AND DRIVEN BEES.

[6481.] Why not hive them direct on the empty combs or foundation? I have practised this during the whole of my bee-keeping days, particularly driven bees. These I get into a six-frame box; a light frame is screwed on top to keep the frames in position (over quilts, of course). A loose bottom just the width of box with slips nailed on the edges of loose bottom; such slips forming rims up the sides of box, and then a couple of screws will make all secure in transit; so that ten or twelve of these can be put on a light "pram" wheeled trolly for conveyance by road or rail.

Referring to Mr. Durrant's "Cleaning up and feeding tube"—described on page 411—if one has a hive taking twelve or more frames (and as we seldom leave more than eight frames to winter bees on), why not have a back (or side) entrance according to which way the frames hang, in lower edge of the contracting board, and late in the evening put the wet combs in the vacant

place thus created? Or we might set on the usual outer lift, and then put in the super with six wet combs or the unfinished sections. Bees will clean them perfectly in twenty-four hours. Anyway, that has been my practice for several years, and I have not seen any signs of robbing or disturbance in any shape or form.—A. H., Wavendon, North Bucks.

POOR BEE-SEASON IN JERSEY.

[6482.] We are having a lovely spell of sunshine here, and bees are very busy on the ivy, but the past summer has been so dry that I have only been able to harvest 10½ lb. of saleable honey during the whole season. This is most disappointing after one's preparation for a good honey year. In June last I fitted up over a hundred sections with the best "Weed" foundation, and had fifty shallow-frames fully-built of worked-out comb, all of which were given to my bees anticipating that I should at least be able to get from 100 to 150 lb. of surplus at the lowest estimate therefrom. But the whole of the sections have been removed quite honeyless, and only in one small super of seven shallow-frames was I able to extract the few pounds of honey already mentioned from my six hives. I have interviewed a number of bee-keepers on this island, one of whom has obtained no honey at all from his seventeen hives. As a contrast, his 1905 crop weighed nearly 900 lb. My own crop was close on to 100 lb. from four hives. It looks as if large takes of honey were a thing of the past, but large potatoes and tomatoes (grown outside) appear to have taken the place of honey production. I am trying to winter eleven colonies of bees, and looking forward to next season as giving better results.

Best wishes for continued success to all readers of our B.B.J.—W. W. Kay, St. Brelades, Jersey, C.I., October 25.

HUMBLE BEES FOR NEW ZEALAND.

[6483.] I beg to thank "L. S. C." for his valuable suggestion in "Cappings of Comb" (page 418) for procuring queen humble bees, but they seem to be more easily found this autumn than last and I have already received as many as I want. Will B.B.J. readers therefore kindly send no more?

Vespa media is not now included in the list of British species of wasps. Each of the British species is described in "Hymenoptera Aculeata," the latest and best book on the classification of the British ants, wasps, and wild bees. The author is Edward Saunders, F.R.S., and the book is published by L. Reeve and Co., Henrietta Street, Covent Garden.—F. W. L. Sladen, October 27.

NON-USE OF EXCLUDERS.

[6484.] I notice in your report of the B.B.K.A. Conversazione this week that a gentleman present stated that he never used queen-excluders under surplus-chambers, and never under these conditions found brood in sections (see page 423). That is precisely my own plan of working. I never use queen-excluder under sections, and sometimes not even under shallow-frames, and my experience is that brood does not appear in sections so placed oftener than one in a thousand! I therefore consider that the advantages of excluder do not anything like compensate for the disadvantage of hindering the bees from freely entering section-racks, and, consequently, tending to induce swarming. I always advise beginners not to use excluders if they only work for sections, and believe that its use by beginners is a fruitful cause of swarming. I generally use excluders under shallow-frames, although I have even worked these successfully without it in some seasons so the comment that the fact was "extraordinary" surprised me, more particularly as I have heard many bee-keepers (experts among them) deprecate the use of queen-excluders when working only for sections. I may mention the only cases I have known of brood in sections was when a "bait-section" with honey in was used, and that particular section in each case was found to contain drone-brood. — Mid Oxon, Standlake, October 25.

NOTES FROM A BEGINNER.

[6485.] I am only a novice in bee-keeping, the present being my third season. My start was made in 1904, when my father brought me a good swarm on June 19, from which I got 12 lb. of surplus in the following year. The same person sent me another swarm, and the man who brought the bees having had more experience in bee-work than myself, I got him to fix the foundation in the frames and hive the bees for me. I saw the queen enter hive, and everything seemed right, but after about five days I noticed that the bees were listless and did not seem to work well; so I opened the hive, found combs built in all directions, the foundation having fallen out of most of the frames on to the floor-board. My remarks for a few minutes were doubtless not very edifying, but I took the frames out, fixed them up again, thinking things would go on well. But not feel-

ing quite safe, I looked in again on the fourth day, but could see no eggs or find the queen. So I called on a friend and got a queen from him in cage and introduced her as directed. Then after the usual time had expired I liberated her, and next morning found her dead. In this predicament I got my friend to examine the bees, when he found a few eggs on the combs and said there was a laying worker there, and promised me another queen in the course of a few days, but failed to get one for about a fortnight. When he did bring one he opened the hive to see how matters stood, and to his surprise found six young queens moving about the combs and several others hatching out. All of these he took away with him save one, which he left in. The bees in that hive for the rest of the season consisted of blacks and Italians. Of course, I got no surplus from them. I had a swarm from my first stock in May, 1905, making my total up to three. One Saturday, about the end of July of that year, my daughter came home about 5 o'clock and said there was a swarm on the hedge in the Uxbridge Road, not far from my house. So I went and took them in a skep and placed same inside body-box on stand, thinking of transferring them on to frames in spring. There was about 2½ lb. of bees. I fed them with syrup made from "Guide Book" recipe, but they would not take much of it down, although I kept putting it on in small quantities. They did not get on well, however, till one warm day in early spring I took skep off and cut combs out, tied them in three frames, covered them up warmly, after giving them some honey and castor sugar mixed. In about a fortnight I gave them a comb of brood from another hive along with a frame of foundation. I repeated this operation twice during the next five weeks. The result of this was by mid-June this was my strongest lot, from which I got 60 lb. of surplus honey. I have taken B.B.J. from my start and find it both helpful and interesting. I also have Mr. Cowan's "Honey Bee," the "Guide Book," and one or two others, which I must study if I can get time during the present winter.—T. W. S.

CAPPINGS OF COMB.

Durrant's Feeding Tube (p. 411).—This is simple enough and well worth a trial. Outside feeding certainly stimulates more than any other variety. The device is, of course, of no use for feeding late in the year. Bees are reluctant to clean up unfinished heather sections placed under cover on their very doorstep, let alone next door! There is, however, a great difference in the habit of stocks in this matter. Some will and some will not. It is not much use expecting a wealthy stock to do much menial cleaning-up work of this kind. Hungry but lusty villains are the best "removers while you wait"!

Hiving on Shallow-combs (p. 415).—In the general way the brood-nest is *not* the place for shallow-combs, though, after all, the size of frame is a matter of opinion, as it is the size of brood-nest which matters. My management includes the use of a set of each size for brood purposes, if desired. If "D. M. M." will state fully the objection to my suggestion I will discuss it further.

Hiving Driven Bees (p. 415).—This year I was short of brood-combs, but possessed some well-filled shallow-combs. I have hived several lots of driven bees with the combs arranged in the following order:—Division board, two full brood-combs, one empty brood-comb, three shallow-combs. The bees are clustered in the angle formed by the two sizes of comb.

Hiving Driven Bees at Night (p. 415).—We do not all use "W. B. C." hives, and many of us cannot conveniently use an eke under the body-box. When I have been *obliged* to hive driven bees by lamplight, I have filled one half only of the hive with comb, thrown the bees down in the empty half, supported the quilt by a couple of top-bars, and closed the top of the hive. This is admittedly an emergency plan, but it has saved me much time, and has obviated the confusion of the swarm as to its homeward way, and has prevented trouble with a lot of half-chilled false clusters in the porch angles. It is not clear to me just why "D. M. M." characterises it as reprehensible.

Bee Paralysis (p. 416).—It is not imperative that the signs of dysentery should be visible upon the combs, for the sufferers may be removed in favourable weather, as described by "Nondescript." His case may not have been the usual dysentery, but would still appear to be an allied enteric complaint. Paralysis proper would appear from report to be more difficult of cure. Our friend's honey appears to have been attacked by a ferment of some kind, of which there are many.

Wintering on Alternate Combs and Starters (p. 416).—I tried this plan some years ago without loss, and am packing up some stocks in this way for further experiment. The object of the plan is to provide clustering-room for the bees where the brood-combs are full of honey. Why should this plan "invite disaster"?

Sawcut in Topbars (p. 417).—The suggestion to wax the sawcut is not mine, but may be useful where such frames exist. My frames have solid top-bars and have been fully described in a back number. I

dislike the sawcut and would abolish it if I could.

Wired Foundation (p. 417).—The reasons for this are fully set forth in all the guide books. The defect of unused cells where the wires ran would appear to be due to faulty wiring, caused perhaps by the use of thin foundation.

Heavy Combs (p. 417).—A standard comb weighing "over eight pounds" would average two inches thick. How thick would it be where it elbowed its neighbour? This is wide spacing with a vengeance! I might also say with regard to "Feedholes in Quilt" (p. 417)—this is a very narrow slot ($1\frac{1}{2}$ in. by $\frac{3}{4}$ in.) for a feedhole, and being central will only serve for one space. I prefer a hole which will serve three spaces, or two at least. If the hole be placed out of centre, two quilts will automatically close each other. The tin binding is neat, but the longer dimension given would appear to be wrong, and should read $4\frac{1}{2}$ in. long, or at most $5\frac{1}{4}$ in. long, having a double end, if cut as described. The question headed "The Top of a Section" (p. 438) may be answered by saying: The reason for placing the lock joint at the top is primarily because many sections are split there to receive foundation. With other methods of fixing, it is optional which side is top, but I would still keep the joint up, because the comb is usually better attached to the upper sides, and there is less risk of its parting company.

Amateur or Expert?—It is a little terrifying to inquire of "Amateur" (p. 355) and be answered by "Expert" (p. 426). Congratulations are tendered herewith. By the way, why should so many of us use noms de plume? Would it not be more interesting to the majority of readers if the personality of the writers were not veiled in this way?

Miniature Sections (p. 427).—One of these travelled safely to the north, but was unfortunately broken after arrival. A suggestion that the tiny boxes should be filled with drawn-comb instead of foundation is, I think, a decidedly good one.

Red Clover Bees (p. 428). The value of this is conjectural, but Mr. E. R. Root is too emphatic to be misunderstood, and if the matter were referred to him, he would maintain that he has possessed bees having tongues appreciably longer than the average, and that they gave a return when other stock failed.

[We are fairly well sure that our friend "L. S. C." will concur in the "exploded myth" theory after he has made practical trial of the Ligurian bee as against the native. The opinion of the majority of our largest honey-producers of to-day should surely carry weight in confirming our own view.—EDS.]

Queries and Replies.

[5427.] *Queens Ceasing to Lay in October.*—A month ago, I found that one of my stocks (which had this year given me 64lbs. of surplus honey) was queenless; I therefore procured a fertile queen and introduced her just a month ago to-day. Four days later I examined the hive and found the queen had been accepted all right and in good order, there being already eggs in some of the cells. I did not have an opportunity of further examining the stock till October 25, when to my surprise I found no brood at all in the hive, but many newly-hatched bees. My examination was a hurried one, and I did not see the queen. I may say the stock was not fed after re-queening, as the bees were well supplied with stores. I therefore ask:—Do you think it likely that the queen was laying for only a day or two after her introduction, and is still in the hive, or am I to take it for granted that the stock is again queenless? I send name, and sign "Perplexed," Flintshire, October 25.

REPLY.—It is very likely that the queen has ceased egg laying for the year in the ordinary course, but we advise you to make quite sure whether this is so or not by examining the combs the first fine day when bees are flying freely. It occasionally happens that alien queens are killed by the bees to which they are introduced after being apparently accepted; hence our advice.

Bee Shows to Come.

November 9 and 10, at Chorley, Lancs.—Honey Show of Lancs. B.K.A. in connection with Chorley Chrysanthemum Society's Annual Show. Four Open Classes. Exhibitors allowed to bring honey for sale. Schedules from W. G. Smith, Town Hall Auction Rooms, Chorley, Lancs. **Entries close November 3.**

Notices to Correspondents & Inquirers.

["** A correspondent, dating from Sulby, Isle of Man, says:—"I am desirous of learning from some of your readers who have had any experience of putting honey up in $\frac{1}{4}$, $\frac{1}{2}$, or 1 lb. tins, whether there is a ready demand for honey so put up, and can the tin in any way affect the quality of the honey?"

If any reader can inform our correspondent on the above we will be glad to publish particulars.

C. R. W. (Greenwich).—We should require to see the bee with the curious appendage you describe as "something like a piece of brown thread about 1in. long hanging from the extreme end of its body" before venturing an explanation on the cause thereof.

JAS. BRIGGS.—This is another specimen of *S. gigas*, although not more than two-thirds the length of the specimen mentioned on page 429, it being a peculiarity of these wood-boring insects to vary very much in size.—F. W. L. S.

J. E. SHORT (Birmingham).—Damage to Comb-Capping.—The mischief you mention is caused by the minute insect mentioned (and illustrated) by Mr. F. W. L. Sladen in our pages some time ago. There is no comparison between it and the larvæ of wax moth.

ELGIN (Cumberland).—Bee Nomenclature.—Bee sent shows nothing beyond a slight sign of Ligurian blood, two or three generations back.

Honey Samples.

BRIDGFIELD (South Wales).—Your sample of "Real Welsh" heather honey is very good indeed. It is from the true "ling," and of fine flavour and colour, not quite so thick in consistency as to hang in the jar when turned upside down (as the moor "ling" of the Northern Scottish Highlands does) owing, may be, to a very slight admixture of clover honey. It is a good honey, nevertheless; one we should never tire of using.

W. W. (Sutton-on-Hull).—The sample sent is almost wholly from white clover, and of excellent consistency and colour. The aroma is probably less pronounced now than it would be when taken from the hive, but there is nothing objectionable about it. The honey is fit for any show-bench.

E. GREENWOOD (Blackburn).—No. 1 is a capital heather-blend honey, mainly from the true "ling," but only about the consistency of thick clover-honey. It is an excellent sample for showing in a "heather-blend" class. Regarding No. 2. We should not care to use this on our own table; though it is just what one might expect from "odd leavings" and bits of wax from the honey-press.

W. F. H. T. (Wiltshire).—Your sample of honey is good on all points. It is mainly from white clover. We will be very pleased to insert your very satisfactory report in next week's issue.

M. F. D. (Suffolk).—Neither of the two samples sent is fit for table use. The objectionable flavour is due to the flower or other source from whence it has been gathered by the bees, but we cannot recognise its source. It is so thin that fermentation would be set up before long, and this makes it unsuitable for bee-food, unless boiled to proper consistency of thick syrup.

*** *Some Queries and Replies, &c., are unavoidably held over till next week.*

Special Prepaid Advertisements.

Twelve words and under Sixpence: for every additional Three words or under, One Penny.

ADVERTISER giving up bee-keeping wishes to sell 6 Hives of Bees and Appliances.—Apply Donne, Glencairn, Platt's Lane, Hampstead, N.W. U 29

FOR Sale, 22 Standard Frame HIVES of BEES; County Association expert reports good condition; healthy. What offers? Leaving the county.—WHITING, Chediston, Halesworth. U 30

WANTED, best light, extracted HONEY.—Sample, with lowest price (F.O.R.), and quantity, to JAMES, 1, River Street, Colne, Lancs. U 31

FIVE DOZEN CLOVER HONEY SECTIONS for Sale, 7s. dozen. SNOWDON, Albury, Little Hadham, Herts U 32

FINE, LIGHT-COLOURED, EXTRACTED HONEY, in 28 lb. tins, 56s. cwt.; sample, 2d.—A. E. ROWELL, Ashdon, S. Walden. U 33

HONEY, guaranteed pure English, now on hand; 2 cwt. 50s., 5 cwt. 55s.; tins free; carriage paid. —F. W. SPRATLING, Haconby, Bourne, Lincs. U 34

LIMNANTHES, splendid for bees; 25 plants 1s., 100 3s. 6d., free.—BALLY, Storeton Road, Birkenhead. U 22

1½ CWT. FINEST WHITE CLOVER HONEY, in 28 lb. tins, 14s. each, 56s. cwt.; also quantity in 1, 2 and 3 lb. glass jars, 7s. dozen lbs.; sample, 3d. —LILLEY, Mill Farm, Dean, Kimbolton. T 77

WANTED, six Stocks, any race, healthy.—WATSON, Letton Gardens, Thetford, Norfolk. U 37

HIGH-CLASS Dragoon Pigeons, Chequers, Blues, Grizzles, splendid type; written pedigrees, from 5s. each; bargains. Exchange extracted honey.—TALBOT, Postmaster, Romford. U 36

HEATHER HONEY, in ½ cwt. tins; quality guaranteed same as awarded 2nd prize at Groceries and Dairy shows; 16s. per tin, tins free.—W. SPROSTON, Slingborough, Great Haywood, Staffordshire. U 35

HONEY, LIGHT EXTRACTED, screw jars, 8s. 6d. dozen, £5 gross; bulk, 53s. cwt.—CHARTER, Tattingstone, Ipswich. U 28

SPLENDID HEATHER HONEY, 6s. 6d. per stone. Sample, 6d.—WRIGHT, 71, Westgate, Pickering. U 27

TWO GOOD MAGIC LANTERNS, with several dozen slides, nursery tales, and humorous pictures, cheap.—W. WOODS, Normandy, Guildford. U 26

LIMNANTHES DOUGLASSI, splendid honey plant (white and yellow flower), bloom in May, 120 for 1s.—W. HAZELWOOD, Elminster. U 25

WANTED, HONEY EXTRACTOR and RIPENER; exchange Rippingille's hot-water apparatus for greenhouse.—10, Eastbourne Terrace, Rugby Road, Leamington. U 24

FEW spare FERTILE QUEENS, from driven bees, 1s. 3d. each. Order quickly.—GORDON, Bassingbourn, Royston, Herts. U 23

STRONG HEALTHY STOCKS, in skeps; young Queens, well stored, 11s. 6d.—SOLE, Poplar Grove, New Malden, Surrey. U 38

HONEY.—WHITE CLOVER and SAINFOIN HONEY, in 1 lb. (full) screw-cap bottles, at 8s. dozen; also 4½ cwt., same quality, in 28 lb. tins, 56s. cwt. on rail. Sample, 3d.; tins free.—P. JEFFERIES, Kemble, Cirencester.

FOR Sale, four stocks bees, bar-frame hives, well supplied stores, guaranteed healthy, 30s. each; also White Wyandotte cock, splendid laying strain, 6s.—HEMMING BROS., Standlake, Witney. U 16

HALF TON HONEY, finest quality, 28 lbs. 14s., 1 cwt. 53s., 2 cwt. and upwards at 50s. Sample, 4d.—OWEN BROWNING, Ashley, Kingsomborne, Hants. U 21

HONEY EXTRACTOR wanted, "Cowan" preferred; must be in thorough working order.—W. A. KENNEDY, Powbank, Prestwick, Ayrshire. U 19

PRIZE WINNING LIGHT COLOURED HONEY for sale, in 1 lb. screw cap bottles, or 14 lb. tins, also sections, cheap.—DAVID HANCOX, Deddington, Oxon. U 14

4 CWT. FINE LIGHT HONEY, in 28 lb. tins, 50s. per cwt. Sample, 2d.—Penfold, West Street, Epsom. U 20

38 STOCKS HEALTHY BEES FOR SALE, three "Wells," the rest "W.B.C." hives, well stored; owner leaving district.—NORTH, Lupton Apiary, Kirkby Lonsdale. U 10

FINEST CLOVER HONEY, liquid or granulated, screw cap jars, 9s. dozen; Sections, 8s. dozen.—H. DILWORTH, Shangton, Kibworth, Leicester. T 91

Editorial, Notices, &c.

PRONUNCIATION OF "BEE WORDS."

It may be within the recollection of readers that an interesting discussion was reported in our pages some time ago on the pronunciation of the word "propolis," so often used by bee-keepers, the result being so satisfactory that the accent is now rarely laid on the second syllable. Occasionally the word is pronounced "propole-iss," but only by those who do not mix freely with bee-keepers. In connection with this, we may refer to a letter received the other day from a reader who is - to use his own phrase—"a bee-keeping Schoolmaster" on the pronunciation of bee-words which we hope to deal with later in a manner satisfactory to all.

The subject is full of interest in view of the technical instruction now being given in schools under the auspices of County Councils, and when teachers themselves are —like our correspondent enthusiastic bee-men, we shall be more than pleased to be the means of correcting mispronunciation by both teachers and students.

Correspondence.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

**** In order to facilitate reference, Correspondents, when speaking of any letter or query previously inserted, will oblige by mentioning the number of the letter as well as the page on which it appears.*

CRITICISING EXHIBITORS.

THE ART OF JUDGING.

[6486.] Our veteran contributor, Wm. Woodley, in his "Notes" last week has a few comments on the season's honey shows. As he is a past-master in all that relates to the showing of honey, his criticisms will carry weight with most readers, so when they seem likely to mislead he must pardon their being called in question. Mr. W. expresses strong disapproval, to the length of boycotting those honey-dealers who exhibit at the dairy show; yet, but a dozen lines above, he congratulates a well-known honey-dealer on his "winning the challenge cup outright." Which is the right opinion? Would it not be wiser and more fair to stop all talk of boycott and lay the blame, if any, on the schedule under which the dealers exhibit?

Granting that it is desirable to prevent dealers from exhibiting in the same classes as amateurs, will Mr. W., or anyone agreeing with him, send a draft wording for classes for comb and extracted honey which will carry out their views? It would no doubt have the most careful consideration of the Exhibitions' Committee. The difficulty, however, lies in accurately defining a "honey-dealer." Again, it might have been supposed that Mr. Woodley was fully acquainted with the methodical way in which the judging is done at the large London shows; his remark about the end numbers in a large class is evidence that he, at any rate, has not learnt how it is done, and may mislead exhibitors into thinking that "position" in a class has anything to do with the chance of winning. As many readers may like to know the "how," a few words on the subject may be acceptable.

May I, then, be allowed to say at all large shows two judges are appointed to make the awards. On entering upon their work they are each provided with a judging-book, containing in columns on its perforated pages a duplicate set of the numbers in each class, and columns for remarks and awards; each class is headed with its number in the schedule and a statement of the prizes to be awarded. No information of any description as to the exhibits or exhibitors is given. One jar of each exhibit having been uncapped and placed in front of its fellows on the stage, the judges, armed with their books, face the class (whether forty-eight or fifty-eight entries is no matter), and it is usual for the judges to begin at opposite ends and work past each other till each reaches the other end.

As each sample is tasted it is judged for quality, a note made in the "remarks" column, and, as a guide for the second stage, a position more or less near to the front edge of the bench is given to it. Arrived at the end the judges compare notes, and a second tasting of some few settles any discrepancy of opinion that may have arisen. This first tasting will dispose of the majority which are only good, leaving in the front rank the very good and very excellent probably some dozen or fifteen samples out of a large class. The tasting is then gone through again in order to check or amplify the notes first made, and this time the samples are compared one with another. This process will probably reduce the number down to about half a dozen, which contains the prize-winners. Usually one or two stand out super-excellent; the difficulty lies in discriminating between third, fourth, and reserve numbers. Here the minor points tell; flavours being almost alike, colour, brightness, and consistency are all weighed in the balance and determine the final result. It will thus be seen that there is no question of remembering what No. 1 is like

when tasting No. 48. It is simply a method of rejecting—first, "the not good enough"; second, "the not quite so good"; third, the grading with the utmost care and delicacy of the few "best" left in the running for the prizes. The winners being finally settled, the positions on the show-bench given when going through the second tasting rapidly points out those which are worthy of the v.h.c., h.c., or c. Some will no doubt ask—Does not the palate become jaded? Yes, but not quickly. Letting it rest during the time taken in judging a class of comb-honey or of wax is sufficient to bring it back to the normal state ready for another class of extracted honey. But the tasting of a long class of dark honey is certainly not a joy!—LIBRA. October 31.

NOTES FROM INVERNESS-SHIRE.

A GOOD REPORT FROM SCOTLAND.

[6487.] After a season of alternate hope and despair, the honey harvest in this part of North Britain has been, on the whole, fairly good. The spring was for the most part wet and cold, and, in consequence, stocks were very weak, so weak indeed were mine that I had no hopes of any surplus. It was astonishing, however, to see how rapidly the bees increased in numbers during June and July, so much so that by the beginning of August all my hives were in prime condition. I put on "baited" racks of sections with the highest hopes of a record "take" of heather honey. Everything promised well for a day or two, then the weather broke up—as it did last year—and all prospects of honey again vanished.

Mr. Ellis's report of the season in Rossshire (6,464, p. 114) was exactly my experience here. We had a few good days at the beginning of September, during which time the heather honey rolled in, so that more surplus-chambers had to be added. I had on each hive two racks of sections partly filled, and, preferring to have a few good ones well filled and sealed rather than a lot only partially completed, I did not put on more for fear of bad weather, except to one or two hives. I did this "just for luck," as the saying goes, and it was fortunate I did so, as they got filled up splendidly. Had I ventured more I would have got nearly double the quantity of honey I now have—viz., an average of about 40 lbs. per hive. Never have I seen a better lot of sections than those I took off. Not more than twenty of the whole lot weighed less than 16½ oz. I have sold them all at 1s. 3d. each wholesale, besides taking the prize at shows. The demand for heather honey far exceeds the supply. I find that the "get-up," neatness, and cleanliness of sections help the selling more than anything else, so long as the quality of the honey is good, of course. I have sold some to shooting tenants and others, who, having plenty from their own hives, still buy mine, because of their good appearance, and consequent suitability for sending as gifts to their friends.

Italian Bees—I have tried these bees now for about five years, and they have been to me a long sorrow. My charge against them is that if there is a stop, or shortage, in the honey flow for a time they straightway begin to seal the half-filled sections, so if there is an improvement in the weather they are helpless. In this way, two years ago, I had a lot of miserable half-filled and sealed sections. The blacks never do this. During the present year two healthy and crowded Italian stocks idled away the season in an unaccountable fashion, and so in my case it shall be exit Italians!

Lace Bands, etc.—I wish some of our dealers would bring out gummed lace bands with suitable address spaces and wording for all kinds of honey, and also gummed labels. I should think all bee-keepers would be glad of the convenience and usefulness of both of these. Another thing that I regard as a long-felt want is a miniature booklet, less than 4 by 4, that could be put up with packages of sections—something like the Rev. Banck's booklet, only smaller and more fanciful, and more in praise of comb-honey. Messrs. Root's "Food Value of Honey," by Dr. Miller, is the thing, only it is a leaflet and American, and not very nice. If one of our regular contributors would write and publish something of this kind it would be sure to sell well, and would help much to increase the consumption and the sale of honey.—A. D., Glenurquhart, Inverness.

THE SEASON IN HEREFORDSHIRE.

A SATISFACTORY REPORT.

[6488.] The honey season being now over we can total up the result, which, in this neighbourhood, is more favourable than seemed likely to be the case two months ago, so far as the amount of surplus is concerned, though the quality is not up to the average standard in consequence of a certain proportion of honey-dew being stored before the flow from the white clover was over. This is my first experience of this particular annoyance. However, the surplus thus mixed is not by any means uneatable, so I am offering it locally at 3d. per lb., and I do not think there will be much difficulty in selling it at that price, although I have more than a hundredweight of it.

I have had this year a renewal of my experience of seven years ago. Although living at least four miles from any quantity of heather, I have secured about 160 lb. of

surplus from this source. The very fine weather during August and September enabled the bees to forage at much beyond the usual distance. In 1899, it was the same, when from six hives I got 229 lb. of capital heather honey. My average "take" for 1906 works out at $63\frac{3}{4}$ lb. per hive. The best yield from one lot being 102 lb. Having reduced my stocks to seven in the spring by uniting, the total result is encouraging, for I have increased to eleven stocks by natural swarming, and have also secured the surplus already mentioned. My experience again runs counter to the dictum that "you must not expect increase and surplus from the same hive in the same year." My first hive swarmed on May 29; the swarm yielded $84\frac{1}{2}$ lb.; the swarmed stock, $15\frac{1}{2}$ lb.; total, 100 lb. Another swarm gave $68\frac{1}{2}$ lb., and the old stock 25 lb.; total $93\frac{1}{2}$ lb. The other two swarms gathered $81\frac{1}{2}$ lb. and $88\frac{1}{2}$ lb. respectively. Here surely is surplus, as well as an increase from seven to eleven colonies. The three hives which did not swarm gave me 70 lb., $75\frac{1}{2}$ lb., and 102 lb. respectively. The two which gave the smaller amounts were stocks united in the spring. One wonders whether they might not have done better if left in four hives? So far as my experience goes, they would certainly not have done worse. They were fairly strong before uniting, having brood in five or six frames each.

I have also found that "room in advance" will not always prevent swarming. A hive supered on May 18 swarmed on June 30, having then two supers on, though not full of honey. The swarm I had on May 29 threw off a virgin swarm on July 13, which I returned after cutting out eight or ten queen-cells. They gave me no further trouble.

I notice complaints from divers correspondents in your pages about the low prices at which honey is sometimes offered, and again complaints that no market can be found for the surplus secured. And then I reflect upon the fact that the best energies of a large number of bee-keepers are devoted to the work of increasing the number of those who are honey-producers, and I conclude that the two things bear the relation of cause and effect. The keener the competition for customers, the smaller the profit made. The more our English honey is driven by over-production into competition with the foreign supply, the lower must the price become. If some of our numerous "experts" did more to popularise the use of honey as an article of food, it would be a benefit to both consumer and producer. I should like to hear what other friends think on this subject, and, with your permission, Messrs. Editors, I may return to it on a future occasion. I fear I have already trespassed too freely upon your space. — W. H., Brilley, Herefordshire, October 9.

INDUSTRIAL EXHIBITION, EDINBURGH.

REID'S BEE-HOUSE.

[6489.] It may be remembered that a photo and description of my bee-house appeared in the "Homes of the Honey-bee" in the B.B.J. of June 8 last year. It was exhibited for the first time at the above exhibition, held last month, where it was awarded 1st prize and silver medal. I had the pleasure of meeting several advanced bee-keeping, amongst whom were the Revs. John Allan Gray (Selkirk) and S. Lyle Orr (Ireland).

I have good reason to be satisfied with the favourable opinions expressed regarding it.

There is one thing, however, that I wish to call attention to. One young gentleman informed me that his father an dhe had made a hive on the same lines, and when cross-examined it came out that they had taken their ideas from the photo of my bee-house referred to above as having appeared in the B.B.J.

When I sent you the photo the word "patent" was intentionally prominently displayed on the new entrances, but for some reason it did not appear, at which I felt disappointed, because I meant it as a warning to probable imitators.

Results would seem to prove that I had good cause to take this precaution.

It may be possible that some of your readers may not know why people go to the trouble and expense of taking out a patent, and that they render themselves liable to be prosecuted if they infringe it.

I ask you, therefore, to allow me to inform the knowing ones, and to warn those who are ignorant that my bee-house is a patented article, and they cannot legally imitate it in any way. It does seem hard that after all the years of thought, trouble, and expense I have had in bringing my invention to its present state that I should be deprived of my just rights by others cribbing my ideas and imitating it. After last week's experience at the exhibition, which was the first time it has been shown, I am satisfied that my bee-house is constructed on the *right* lines. I am, therefore, determined to uphold my claim, and to take legal proceedings against any one who in any way infringes my patent. — ALEXANDER REID, Balloan, Muir-of-Ord, N.B.

[We are very pleased to be the medium of making Mr. Reid's views known, as expressed in the above letter, and with re-

gard to our having deleted the word "patent" from the photo sent as a contribution to our bee-garden pictures, it needs only to be explained that we "stop out" many signs, etc., that may be regarded more or less as in the light of advertisements, for the reason that the illustrations are not to be taken as advertisements in any form.—EDS.]

BEES IN DUMFRIESSHIRE.

[6490.] Having seen no report regarding the past honey season from this part of Scotland, I send a few notes. The season here has not been one of the best, my average take being about 30 lb. per hive, whereas last year I averaged 62 lb. per hive. My best hive, however, I ruined by introducing an Italian queen in March, which proved to be a drone-breeder; a fact I only discovered about a month later, by which time the colony had dwindled very much. But I got another queen and managed to get twenty-one sections from this hive, besides leaving enough food for winter. My best stock yielded 65 lb. extracted honey, the next being a long way down, viz., 30 lb. Three or four of the others only gave about 20 lb. each. My crop was all from clover, there being no heather in this district. The last half of the month of July was very wet, which no doubt affected the honey harvest considerably. One very strong hive, from which much was expected, did next to nothing, owing to excessive swarming. The first swarm came from it on June 2, but the bees returned to the parent hive, so I cut out all queen-cells and gave another rack of sections. Nevertheless, the bees swarmed again in ten days. I then examined the hive and removed three queen-cells and returned the swarm, but all to no purpose, for they swarmed again seven days afterwards. I then removed half the frames and replaced them with full sheets of foundation. A fortnight afterwards I once more examined the frames, only to find the stock queenless, so that I had all my trouble for nothing, save a small bit of honey.—J. G., Annan, Dumfriesshire.

DISTANCE BEES TRAVEL.

[6491.] I am forwarding per post a tin box containing a rather miscellaneous collection of bee items. Of the samples of comb, I may say, the two small pieces were built by a driven lot of bees, and I think you will agree with me that these combs are largely filled with heather honey. The bees referred to were driven during the very hot days at the end of September. I had two lots, but lost one through the bits of comb they had built in the skep breaking down, and the bees being unable to get out discharged their honey and so perished. The distance of these two lots of bees from the heather would be not less than four miles.

The other and large piece of comb was cut from one of my own shallow-frames. You will see it has been through the extractor, but through lying about the honey left in has become rather thin. I notice that you say heather honey will not extract, probably pure heather honey will not, but I have been able to extract a considerable amount of heather mixture, though it needs care. Indeed, I have been compelled to put the combs through twice, turning very slowly the first time and faster at the second attempt. The reason of this is that this thick jelly-like honey clogged up the strainer and prevented me from getting on with the job. It was next to impossible to get it through fine muslin, and sometimes the strainer had to be emptied and washed. One of my supers now contains about fifteen pounds of this honey which I cannot extract.

The small earthenware jar of honey is a sample of that got from the second time of putting the combs through the machine. It will soon have granulated solid, but that obtained from the first extracting is still liquid and quite clear.

And yet the distance from my apiary to the heather is by road eight miles; probably this distance would be reduced to six in a bee-line. I obtain a quantity of this honey every year, but this year the quantity has been so great that it has made feeding for winter quite unnecessary.

Of the two small bits of wax sent, the round piece was got from the honey-press. The other piece is from the same lot of old combs but by the old process of boiling in a bag.

The total quantity of wax secured from thirty-four old combs weighed 8 lb., which is better than burning them.

It may interest you to know that I have worked out this season some foundation bought from Mr. T. B. Blow before he went to Japan.

In conclusion, I beg to thank our Editors and their numerous correspondents for the interesting and instructive matter which appears in the B.B.J. every week. But let us all keep an open mind when new facts dispel old ideas.—A STAFFORDSHIRE BEEMAN, October 27.

[Your sample bits of comb fared badly in post; indeed, so smashed up were they that it was impossible to make anything of them. The liquid honey was in bottom of box, and the several small packets in paper were saturated with it. The only thing intact was the little earthenware jar of granulated honey, which had probably caused the smash of bits of comb. There is

plainly some heather honey in the last-named jar, but not much. We cannot say anything about the rest, except that the result of your wax from honey-press is very satisfactory.—EDS.]

THE BEE-SEASON IN BANFFSHIRE.

AN EXCELLENT REPORT.

[6492.] In the B.B.J. of last week (page 436) I see a letter over the initials "T. W. S.," in the first paragraph of which I observe a note of surprise regarding the particulars of work done by two swarms as given by your contributor "D. M. M.," Banff (6463, page 414). But, in order to show that there is nothing very extraordinary in a swarm giving as many as 109 sections in the same year in which it was hived, one does not need to go to England for swarms to secure such a good return. I am sending you herewith the results from my two best stocks this season. No. 1 on nine of Simmins's commercial frames had an ordinary box of ten standard frames placed above on June 7, and by July 5 the whole nineteen frames were crowded with bees and brood, which were then divided by simply lifting off the box of ten standard frames and putting them in a hive on the stand of the parent stock, and then shifting the latter to a new stand. This was done in the forenoon, and in the afternoon I could see, by the movements of the bees in the parent stock, that they were queenless. In the evening a laying queen was introduced, which had been previously reared from the parent stock. The new stock has given me 105 sections and 15 lb. of heather honey extracted from shallow-frames, and the parent stock has given 63 sections, altogether 183 lbs. of honey, and left abundance of natural stores in both stocks to last till June next year.

No. 2 was made up of two swarms, which came off simultaneously, and united of themselves. The double swarm was hived on 11 standard frames, filled with full sheets of "wired" foundation, and has yielded 147 marketable sections and 21 partly finished ones. On removal of sections, however, the stock was found to be queenless, but brood had been reared in every one of the 11 frames, and they had queen-cells well advanced, all of which were cut off, and a laying queen introduced. I may mention that my nine stocks (spring count) have yielded me 774 lbs. honey and increased to thirteen stocks. All my honey is sold. Clover fetched 8d. to 9d. per 1 lb. section; clover and heather blend, 9d to 10d. per 1 lb. section; pure heather, 1s. per 1 lb. section; and has realised altogether £28 17s. 11½d.; expenditure, £5 18s. 3d.: net profit, £22 19s. 8½d. (not counting anything of labour).—W. MOIR, Banffshire, November 5.

REMOVING SURPLUS HONEY.

A NEW DEVICE.

[6493.] In reading your report of the conversazione of the British Bee-keepers' Association in your valuable "Bee Journal" last week, I noticed that the question of handling supers and the Porter bee-escape board was discussed, and that bee-keepers generally experienced great difficulties in lifting supers, just as I used to have years ago. Since that time, however, I have invented what I call a super-lift, which acts very well. It will lift one or two supers high enough to enable a bee-keeper to insert an empty one under, or only high enough for inserting the bee-escape boards. Then, by simply reversing the handle, the super drops back to its former position without disturbing the bees in the least. In the case of brace-combs also I can give the super a twist in the lift, as it hangs on a threaded pivot from the handle.

I have been advised by a bee-keeper to patent my super-lift, as he considers it the most useful appliance yet invented for the purpose of handling supers. For the last four years I have been a regular reader of your most valuable Journal, over which I spend many happy hours in perusing its pages.

If you can give me a line of reply to say whether you think the contrivance will be of service to bee-keepers, I will be much obliged. I send name and sign. W. S., Joiner, Pembrokeshire, Oct. 30.

[It is quite impossible for us to express an opinion on the usefulness or otherwise of an appliance without inspection. If you care to send one on, we would give our personal view of your invention, but we never accept payment for services of this kind.—EDS.]

HONEY SHOWS, ETC.

STAGING "FAKED" HONEY.

[6494.] To my mind the indifference of bee-keepers with regard to showing is the natural result of the adoption of a honey standard, which puts a premium upon the "faked" article to the detriment of the natural product. In a good many cases the prize-card merely registers the exhibitor's skill as a "faker," and not as a honey producer, and if he sells his produce on the strength of his "success" he stands condemned of fraudulent dealing. It is nothing less than an insult for an exhibitor who stages the natural article to be effaced by another whose exhibit is honey in name only. When the natural article, as finished by *Apis mellifica*, receives its due

recognition, I do not think there will be any cause to lament the apathy of bee-keepers.

Let me here add that I am not an exhibitor myself, but I consider Mr. Woodley's defence of "faking" is weak, and his similes miss their mark. "Faked" honey is altered in composition, and this cannot be said of the pig which has been washed, nor of the machine which has been painted. The same remarks apply to the onions and potatoes. There is no "faking" in the sense that the articles have been changed, while the machines "in the hands of the firm's best mechanics" and the "shearing-machine in the hands of experts" is a question of policy and dexterity.

Your report of the discussion on the subject of super-clearing last week is interesting, and I would like to say that a friend here and myself practised "D. M. M.'s" plan this year, and found it to answer admirably. If this meets the eye of that gentleman will he accept my thanks.

Writing of "faking" and super-clearing reminds me that I have a "Porter" escape which has been "faked," or something worse. I bought it from one of your advertisers, whose name is enclosed along with the escape for your inspection. I offer it to you for a present, and if you get one bee to pass it you will succeed where I have failed. To put a thing like that upon a hive at night and then face a cloud of angry bees in the morning has been the experience of—W. H. W., Beds., Oct. 29.

[It would surely add considerably to the force of our correspondent's comments on the alleged malpractices he so severely condemns, if some tangible evidence was given in support of his sweeping charges. We have had as much personal experience of shows as most people, and certainly no such exhibits as "honey in name only" have ever come to our notice. With regard to the "Porter"(?) escape, we quite agree with your opinion of the escape sent. It is not a "Porter" escape at all, but a bad imitation of that very admirable bee-apparatus, and will not answer the purpose of Mr. Porter's invention.—Eds.]

BEE-NOTES BY A BEGINNER.

[6495.] Thinking that a few notes from a tyro might encourage other "beginners," I venture to send you a *résumé* of my experiences in commencing bee-keeping.

Some years ago I was asked by a friend, who was going away for a holiday, if I would mind giving another rack of sections to his hive. Such work was entirely a "new sensation" to me, and not without some internal misgivings I consented. He gave me minute instructions how to proceed, and one evening I plucked up enough courage to enter upon my "dangerous" task. Opening the hive, I hurriedly removed the quilt and poured in enough smoke to stupefy the lot—so thought I. Then I essayed to lift the rack, but to my horror it would not move. The bees began to utter what I subsequently found were "war cries," and (tell it not in Gath) I became afraid.

Still, I made several more frantic efforts to move that rack; but by this time my enemies were fairly on the warpath and I was stung in a dozen places. Then, thinking discretion was the better part of valour, I, like a certain famous general, made an "advance to the rear." It is true I had some of my wounds "in front," but not all. Later I returned and closed up the hive, but I was badly beaten. Thus ended my first "experience" with bees.

Two years passed, and I was in search of a hobby. What should it be? Musingly I remembered the words of the proverb: "Eat honey, my son, because it is good, and the honeycomb most sweet to thy throat." I thought ruefully of my first attempt to touch a honeycomb, and I felt that I was not a Samson, and the "lion" was not dead when I touched his mouth. I wondered if Shakespeare had tried bees when he wrote that famous question: "To be or not to be?"

Anyhow, *Cras* is the cry of to-morrow, and I wanted a hobby to-day. So I purchased a swarm, a hive, and last, but best of all, Mr. Cowan's "Guide Book," and by following his simple instructions, at the end of the year I owned a strong colony of bees.

The next season, thinking that unity is strength, I became a member of the Warwickshire Bee-keepers' Association, and further, ordered my first copy of the B.B.J., whose bright welcome pages have ever since been my "guide, philosopher, and friend." As the summer advanced, the possibility of swarms became a problem to me, so I cut the Gordian knot took Father Time by the forelock, and made an artificial swarm, which proved a success.

I was now offered another hive and bees by a friend who had too many. They had to be sent across country by rail, and I think that railway will not forget their advent! For that hive was "packed" in a way unknown to experts; moreover, the bees did not like their 'guard"—at least, they tried to make him leave his carriage, but he was more than a "passive resister," so the bees got themselves ejected instead arriving here in a most unhappy — and what was still worse — queenless state. I gave the motherless bees reinforcements in a comb of well-advanced brood and some new-laid eggs, for which they quickly thanked me by forming a queen-cell. Thus, at the end of my second season I found

myself the happy possessor of three "strong hives in good condition," with which our expert was pleased on his visit. Needless to say, I did not get very much "sweet honeycomb for my throat" that year. Some forty sections, I think.

This season I started feeding early, and had very strong hives when our expert called. Wishing to beat time once more, and yet to get a little honey, I divided two of my hives—fed the queenless portions until they got a mother, then nursed them up into strength for the winter. My other three hives gave me some sixty complete well-filled sections, but I had hoped for more. So next year I propose to work for honey, and take my swarms as they come. I also intend to work with shallow-frames and extract instead of trusting to "sections." I am now closing my third season with five hives, trusting to get a good harvest next year.

As a hobby, I have found bee-keeping interesting beyond measure — leisure time has been profitably filled in; pleasant recreation provided; and—shall I say it?—I have tasted the "sweet honeycomb" and know it is "good," fit even, as Ovid teaches in Philemon and Baucis, for gracing the table of the gods! Then our own dear St. Francis loved to hold converse with and feed his brothers the birds. For, sings Longfellow:—

> "Around Assisi's convent gate,
> The birds, God's poor who cannot wait,
> From moor and mere and darksome wood
> Came flocking for their dole of food."

And Tennyson did well to say, "Sweet St. Francis of Assisi, would that he were here again!" Then, also, our wonderful St. Anthony preached to the fishes. So, following such noble examples, I love my little bees; and if it be true that we can find "sermons in stones," much more can we find lessons in the tireless activity and motherly government of our "colonies"—lessons fit for statesmen, which, if learned, we should not be troubled by problems of the unemployed or by education nightmares. —Rev. F. Louis Brasey-Wright, O.S.F.C., November 2.

HONEY IN SMALL TINS.

[6496.] We note that a correspondent, on page 439 in last week's B.B.J., raises the question of putting honey up in small quantities in tins. We, like the gentleman in the Isle of Man, should very much like to hear what others have done in this line. And it so happens that, when turning over a quantity of bee-tackle at our old home, we came across several gross of one-pound tins, purchased in 1886 by our father, who used to keep bees in those days.

These tins were made quite plain i.e., with no decoration of any kind—and, in order to make them suitable for marketing honey in, a bright and attractive label to go right round the tin, would, in our opinion, have been absolutely necessary.

Judging by the scarcity of honey in this form at the present day, the idea does not seem to have been a success, and, with the idea of bringing honey in this sort of receptacle into more general use, we are trying "decorated" tins this year, in 1-lb. and 2-lb. sizes, printed in four colours, with design as illustration, for marketing some of our own honey.

We have hardly given them a fair trial yet, not having advertised them much, but we believe that they will take well in time, being about the most handy form in which one could have honey; but it is not at all unlikely that the "tinned meat scare" will probably affect the sale a little at first. Besides, people do not like to buy what is not visible to the eye when purchasing, consequently if they see honey being sold in glass jars they may prefer it to "tinned honey."

There is an account by a learned Professor (whose name we cannot recall) on tinned preserves in the B.B.J. about the year 1882, in which the writer gave the results of his experiments, and proved that tin did not act upon honey. As a matter of fact, most honey is stored in tins before being run off into bottles. We do not think it would be advisable to put up honey in smaller quantities than 1 lb. tins, as your correspondent in the Isle of Man suggests. It appears to us that smaller sizes would not be suitable, or even practicable, because of cost of tins.—Jones Bros., Andover.

A NEW BEE-KEEPERS' ASSOCIATION.

[6497.] Last Thursday evening at the "Sunflower," George Street, Croydon, a new bee-keepers' association was formed, to be known as the "Croydon and District Bee-keepers' Association," with the idea of taking in a radius of about five miles around Croydon.

There was an attendance of nearly forty present. Mr. Silver was elected to take the chair, and the secretary pro. tem., Mr. A. Wakerell, stated that he had received promises of support from a number of bee-keepers in the district, who, at present, belonged to no society, providing the association was successfully launched.

Ultimately a resolution was unanimously passed, amid enthusiasm, forming an association.

Mr. Galbraith was elected chairman of committee, Mr. Wakerell secretary, G. White treasurer, and the following the committee: Miss Shaw, Messrs. Bell, H.

Price, jun., J. H. Brown, Handley, Pay, and A. P. Short. All the above appointments to be revised in three months' time. The next meeting was fixed at the same room for Thursday evening, November 8, at 8 p.m., when Miss Shaw will open a discussion on "How to Commence Bee-keeping."—J. S., Croydon, October 27.

ODDS AND ENDS ABOUT BEES.

SOME USEFUL HINTS.

[6498.] *The "W. B. C." Metal End.*—A useful device for pushing on "W. B. C." metal ends may be made from a piece of wood 6in. by 4in. by 1½in., or thereby. Mortise a hole in the centre to admit the end of a standard frame. Now slip on the metal end and push home into the socket. By this means I prepared over 200 frames in about an hour.

Queen-mating in Small Boxes.—Last year I expressed an opinion that queens were much dearer than there was any necessity for. I had read Mr. Doolittle's fascinating work and also Mr. Sladen's book on "Queen-rearing in England." I had for some years done a little at the artificial business with a fair measure of success on Doolittle's plan. I am sorry that I could not say the same for Mr. Sladen's method. The bees always became cross-tempered during manipulation. My chief difficulty was in getting queens mated. It was just as cheap to purchase as to rear them. However, I devoted last winter to hard thinking and hard working and evolved out of my imagination a suitable mating-box—cost 6d. Of these I prepared forty, and stocked them with comb from frames cleansed of pollen. The bees employed would cost about 12s. 6d., feeding about 2s. 6d.; total £1 15s.; result, thirty-three mated queens. The details are very simple and would take some time to explain fully, but as I have gleaned from many "bee-men," perhaps some of your readers might care to try the plan.

Pollen-clogged Combs.—Your correspondent, Mr. Harborne, reminds me (on page 416) that I have had something further to say on this subject for the last six months. I am glad to observe that the matter has been brought before the B.B.K.A., and that the method has at last been acknowledged to be efficacious. The manner of presenting the subject at the Conversazione of the Association reminds me of *America* being discovered by *Columbus!* It is eight years since I first wrote to the B.B.J. an account of cleansing such combs, but for some reason the letter never appeared—whether it missed in post or not I cannot say. Some years later I forwarded a comb for inspection, and on receiving it back by post I cleansed and returned it to the post-office in less than an hour. An acknowledgment of the same was duly given, but with a rather disparaging reference to older combs. Since then, to several anxious inquirers on the subject, there have appeared answers to the effect that badly clogged combs were only fit to be destroyed. Now, last summer, I had a fresh supply of water brought into the house, and the pressure was so great that I immediately turned it to account for cleansing pollen-clogged combs. I had a special rose made to screw on to the bath tap. I then half-filled the bath and put in as many combs as it would hold. In about an hour, or whenever convenient, I turned on the tap and simply held the frames under the spray and both sides would be cleansed in five minutes. As mentioned above, I stocked all my mating-boxes from cleansed comb. In cutting them out I left 1½in. on the top-bar, and used these as starters for swarms. I never use the syringe at all now, except to wash finally with phenyle water. I have also discarded the washing-board. I have destroyed no good combs for eight years.

Cheap Queen-mating.—No claim is made to originality in the following notes. I am indebted to the works of Messrs. Doolittle and Sladen for most of the ideas. I have not read "Swarthmore's" works on the subject, but mean to study them during this winter. I have read whatever has so far appeared in the B.B.J. on queen-rearing with great interest. I have dabbled at artificial queen-rearing for some years, but always mated them in large nucleus hives of four or five frames. Consequently it was as cheap to buy them ready made. From some successful mating, with a comparatively small force of bees in 1905, I was convinced that success on a large scale was possible during July and August in this locality. I simply wished surplus queens for requeening, or emergencies, and not for working into nuclei. My preparations were all made with this end in view. In 1905 I had a second swarm—the first I have had for twenty-five years—and noted a few facts in connection with it. Thus, ten days elapsed before the queen began to lay, and as there was no brood it was evident any hive having the same conditions ought to succeed as well. I now settled on a *self-contained* mating-box, a confining-box, and the method of stocking the boxes when queens were hatched; also on making of a number of cages to hold hatched queens.—D. VALLANCE, Dunaskin, N.B.

(*Continued next week.*)

Queries and Replies.

[5428.] *Feeding Bees in November.*—Last spring I bought a stock of bees, and about the end of June I had a good swarm from them, which was successfully hived. Both hives now seem in very good condition, as far as I can tell, and the man from whom I bought them (an expert), who has kindly helped me in all my difficulties, says they are in splendid condition. But with regard to surplus honey, they have been a failure. On October 5 I gave the two hives 6 lbs. of candy, made according to "Guide Book" recipe; but the bees began to carry it out almost at once in little pellets on their tongues, and by October 15 there was nothing worth mentioning left. I therefore ask:—1. Does this sort of thing often happen? and 2. Why do the bees carry off the candy in this way? They seemed to fly right away with it. Since then I have been giving them syrup again, as the weather was so very mild. I shall also be much obliged if you will tell me—3. How long may I go on giving the syrup? as I am afraid I did not start as soon as I ought to have done.—E. Trotman, Timperley.

Reply.—1 and 2. It never occurs if the candy is properly made. The bees are simply carrying off the hard granules they are unable to consume as food. 3. Syrup-food is not suitable for feeding bees with in November. Moreover, if the weather becomes suddenly cold they will refuse syrup-food altogether and die if not otherwise provided for. Send us a sample of your candy, or buy from a dealer a cake of soft candy to show you what the real article is like.

[5429.] *Sharing Profits in Bee-Keeping.*—Will you please tell me in what way I should be paid for managing, say, ten stocks of bees, and how much you consider a fair sum for working that number of stocks for the season, including the work of bottling and selling the honey? In order to explain myself more clearly, I may say say that I am the owner of eight stocks of bees, and my neighbour owns one stock. We are thinking of going into partnership with our bees, and he will put capital into the concern up to the value of my bees, extractor, and about seventy shallow-frames of built-out comb. He undertakes no kind of work with them, not being able to assist in this way. We want to know the fairest way for me to be paid on the honey output. If you will please let us know I will be much obliged.—T. S., Coventry.

Reply.—The plan usually followed in America, when bees are worked on shares, is—if our memory serves—for one man to find bees and all appliances, while the other does all the labour of every kind. The net profits are then shared equally. In your case, it is not easy to judge without going over the whole stock to see its value and condition. Perhaps our esteemed contributor, Mr. W. Woodley, whose wide experience would give weight to his opinion, might be willing to set a fair value on the labour question?

[5430.] *Information on Bees.* I have some bees (a condemned lot, driven in September), in a straw skep, and have been told that I should feed them with 2 or 3 lb. of syrup each week. This I do by means of an inverted jam jar with muslin over the mouth, feeding them when the sun is shining on the skep. But this plan seems to me to expose them too much by doing it so often. I therefore ask: Is it necessary to continue feeding them throughout the winter? The nights may be frosty but the days warm: are they still to be fed at such times? I have also been told to put "cow-dung" around the bottom of skep on the box it stands on: is this necessary? I do not care for the idea: is there any satisfactory substitute? From a stock of bees I have in a frame-hive, I only took off 21 sections this season. This is a heather district, but the bees do not gather any honey after August. I am told that this is due to the very dry season and the consequent poor bloom of the flower, and no fault of the bees, 70 lbs. having been taken off the previous year. Is this likely to be the correct reason for the small quantity of honey produced? Or could you suggest any other more probable reason? Hoping you will excuse the length of my inquiries (I send my name for reference), with thanks in anticipation of reply.—A. V. S., Hants, Oct. 29.

Reply.—Your query is very appropriately headed "Information on Bees," and, while at all times glad to help beginners by giving directions on bee-work, the best information we can give in your case is to spend 1s. 6d. in a text book on bees, which will give pages of instruction on all the points you name, while we could only give a line or two in this column. The "Handbook for Cottagers" may be had for 7d. post free, but those who use frame-hives should have the more comprehensive work.

[5431.] *Moving Hives in Winter.*—I will be glad to have an answer to the following in next issue of the B.B.J. First let me say I am going to move some bees in frame-hives, some time this winter. The "Guide Book" recommends a frame to be covered with perforated zinc or coarse netting. This frame is then placed above the top-bars of frames in body box without any quilts while moving. I have made such frames allowing the bees about an inch space above the combs, and have put the bees away for winter with these frames on, but have given plenty of warm quilts above them. I should like to know—1. Will the bees winter all right like this or must the quilts be close on the combs? 2. While moving, must the quilts be left on, or taken off to allow free ventilation through the netting? 3. I have a stock of bees covering seven frames in which there is very little food stored, but to make good the shortage I have given them two pounds of candy over the combs. Will this last them through the winter? Thanking you in anticipation of replies, I send name, and sign—H. A. G., Hartow.

Reply.—1. The bees will take no harm by having a space above frame tops as stated. 2. If weather is cold the quilts may remain, but if warm, and removal takes place in middle of the day, only one quilt should be left on while in transit. 3. Two pounds of candy will soon disappear if the bees have

little beyond candy for their daily supply. You should see how fast they are taking the candy, and renew the supply as needed.

WEATHER REPORT.

WESTBOURNE, SUSSEX,
October, 1906.

Rainfall, 4·87 in.
Heaviest fall, ·97 in. on 8th.
Rain fell on 22 days.
Above average, 1·01 in.
Sunshine, 112·1 hours.
Brightest day, 14th, 9·5 hours.
Sunless days, 2.
Below average, 8·3 hours.
Maximum temperature, ·65° on 1st and 11th.
Minimum temperature, 32° on 15th.
Minimum on grass, 31° on 15th.
Frosty nights, 1.
Mean maximum, ·59°
Mean minimum, 46·7°
Mean temperature, 52·8°
Above average, 4·8.
Maximum barometer, 30·39 on 25th.
Minimum barometer, 29·17 on 30th.

L. B. BIRKETT.

OCTOBER RAINFALL.

Total fall, 4.59 inches.
Heaviest fall, .85 on 2nd.
Rain fell on 25 days.
W. HEAD, Brilley, Hereford.

Notices to Correspondents & Inquirers.

Letters or queries asking for addresses of manufacturers or correspondents, or where appliances can be purchased, or replies giving such information, can only be inserted as advertisements. The space devoted to letters, queries, and replies is meant for the general good of bee-keepers, and not for advertisements. We wish our correspondents to bear in mind that, as it is necessary for us to go to press in advance of the date of issue, queries cannot always be replied to in the issue immediately following the receipt of their communications.

[*** A correspondent has sent a box of seed of the "Chapman honey plant," which he kindly places at our disposal for any bee-keepers desiring to have a few. We will send on a few to applicants who send a stamped addressed envelope to B.B.J. Office.]

A. M. P. (Penmaenmawr). Virgin Swarms.—When a prime swarm issues in June—as yours did—and, after being housed in a frame-hive, swarms again in the following August, the two months old stock is said to have sent out a "virgin swarm," though the latter is headed by the old queen. It is not easy to say how the term arose, but the above is all we can say about it.

F. MILES (Leicester).—Location for Bees.—1. There is no danger in locating bees near a running brook, in fact the latter will be most useful in forming a natural watering place for the bees. 2. Our preference would be for the position marked A, as affording a south aspect, unless the hives could be placed with entrances facing S.E.

IN A FIX (Sutton Coldfield).—Extracting Beeswax.—The "Gerster" wax extractor is one of the best appliances made for the purpose; but some prefer the "Solar," which is less trouble to work, in fact the wax runs from the combs as the latter melt with the sun's rays without trouble at all. Some manage on the old-fashioned plan of using a bag made of coarse material in which the combs are immersed in hot water and weighted down. The wax rising to the surface of water and being lifted off in a cake after the water cools.

G. C. (Oughtybridge).—Drone-Cell Foundation.—1. No good bee-keeper discards queen-excluder when working shallow-frames for extracted honey. 2. There is an advantage in using drone-cell foundation in the above, but some honey-producers use foundation with a special-sized cell midway between worker and drone size.

Honey Samples.

H. WEAVER (Bangor).—Piece of section sent contains heather honey of excellent quality. It is from the true "ling," and if stored in sections would command a high price.

E. W. J.—Sample is mainly honey-dew, from Lime trees, and is not at all suitable for table use. It may be used as bee-food.

Suspected Comb.

X. Y. Z. (Sittingbourne).—The dead larvæ and young bees sent seem to be slightly affected with the disease known as black brood. The larvæ show none of the usual sign of foul brood.

*** *Some Queries and Replies, &c., are unavoidably held over till next week.*

Special Prepaid Advertisements

Twelve words and under Sixpence: for every additional Three words or under, One Penny.

WANTED, HONEY, POULTRY, part cash for 10-guinea cycle, sewing machine. Sample.—HORTON, Flixton, Manchester. U 45

1,500 LBS. LIGHT CLOVER HONEY, in 28 lb. tins, guaranteed pure, 6d. lb. Quotations. Sample, 3d.—ALBERT COE, Apiary Hall, Ridgewell, Halstead, Essex. U 46

ONE TON of HONEY for Sale, light colour. Sample, 3d.—LAW, Cuckoo, Ashwell, Herts. U 42

STRONG STRAWBERRY PLANTS, 5s. per 1,000, carriage forward.—G. A. PARDOE, Drayton, Belbroughton, Stourbridge. U 41

WANTED, 3 PURE ITALIAN 1906 QUEENS; must be guaranteed healthy.—"P.," care of this Journal. U 40

FOR Sale, 1 gross first-grade SECTIONS HONEY, 7s. per dozen; cash or deposit.—J. TREBBLE, Romansleigh, South Molton. U 44

2½ CWT. PURE ENGLISH HONEY, 5½d. per lb., in 28 lb. tins, on rail; (take the lot carriage paid for cash order); sample 4d.; tins free.—SWAIN, Ryhall, Stamford, Lincs. U 43

FOR Sale, four SKEPS, with strong swarms, in good condition for winter, 11s. each; also a few good secondhand frame hives, cheap, almost new.—HARRISON, Bee Farm, Middleton, Pickering. U 52

PURE HEATHER HONEY, 7s. per stone; screw-cap 1 lb. jars, 9s. per dozen, packed free.—HARRISON, Bee Farm, Middleton, Pickering.

Editorial, Notices, &c.

PRONUNCIATON OF "BEE WORDS."

Reverting to the mention made on page 441 last week of the correct pronunciation of certain "bee words," we print below the letter of "A Bee-keeping Schoolmaster," along with the list of words selected by himself from those commonly used in scientific works on bee-keeping.

SIRS,—As a schoolmaster bee-man I was much interested to find in a former number of the B.B.J. a short article by our good friend, Lieut.-Colonel Walker, dealing with the correct pronunciation of "bee-words," such as prŏpŏlis, băcillus, etc., in which the colonel deftly uses phonetic spelling to correct these commonly mispronounced words. May I suggest that either yourself, the Colonel, or some other "authority" should give your readers the correct and accepted pronunciation of the following words, particularly showing the *correct placing of the accent* and *whether the vowels are long* or *short*:—

Bee-men who are pushing their study of the honey-bee into the realm of anatomy and physiology would, I am sure, be grateful for such a list of pronunciations, which are apparent enough to classical scholars but are very puzzling to students of meaner educational attainments.

I can foresee that students reading for the second-class certificate would cut out such a list and paste it on the fly-leaf of their "Cowan" or "Cheshire" for purposes of reference.—Yours, etc., THOMAS JOHNSON, Seaman's Moss School, Altrincham, Cheshire, October 9.

The above communication was submitted to a member of the B.B.K.A. Council, in whose knowledge we have confidence, who kindly replies as follows:—

In reply to your request, I forward the subjoined list of forty words, the pronunciation of which your correspondent, "T. J.," desires to know. In order to obviate likely criticisms I should wish a few points to be noted. First, the division into syllables is not always accordant with the etymology of the words. In several instances the separation of the letters has been made to facilitate pronunciation rather than to indicate derivation. For instance, *card-ines* would be more correct than *car-din-es*; also *crabon-idæ* than *crabonidæ*; and *arthro-poda* than *ar-throp-oda*. Secondly, in the first word in the list the initial letter is short in Latin, though in English we say *āpiary* and *āpiculture*. Again, No. 37 is often spoken as if written *trăchea*. In No. 19 the first two syllables are sometimes pronounced as if spelt *hippo*; at others as *hi-po*, the latter being preferable, though we say *hypocrite* as if written *hippocrit*. The second way of spelling No. 11 is the more correct. I need hardly say that the old-fashioned, rather than the Continental, way of pronouncing the vowels is still most largely in vogue among scientific men.

PRONUNCIATION OF WORDS.

1. Ap′-ĭd-ǣ	22. O-cell′i = ose′lli
2. Ar-rēn′-ō-tŏk′-ĭa	23. Oe-soph′-ă-gŭs = eesof′agus
3. Ar-thrŏp′-ŏd-ă	24. Om-măt′-ĭ-um
4. At′-ă-vism	25. Om-mă-tĭd′-ĭ-um
5. Bă-cill′-us alvē′-i	26. Păl′pī
6. Brau′-lă cœcă	27. Pneu-mō-′phy′-sēs = newmōfyses
7. Car′-dĭn-ēs	28. Prŏ′-pŏl-īs = prop-olis
8. Chit-ine = chit-een	29. Ré′-au-mur = ray′omur
9. Chit′-ĭn-ous	30. Sarco-lem′-mă
10. Chō′ rĭ-ŏn	31. Sper-mă-thē′-cā
11. Clyp′-e-ŭs = clip-e-us	32. Sper-mă-tō-phŏr′e
12. Com′-mis-su′r-es	33. Sper-mă-tō-zō′ŏn
13. Crā-bŏn′-ĭdæ	34. Stem′-mă-tă
14. Dē-pressŏr′-ēs	35. Stīpe
15. Dzier′-zŏn	36. Strig′-īl-ĭs = strijilis
16. Epī-derm′-ĭs	37. Trā-chē′-a = tarykee′ah
17. Fæ-cēs = fee-sees	38. Trŏ-chan′ter = trokan′ter
18. Flā-gell′ŭm = flajellum	39. Un-guĭc′-ŭ-li = ungwi′kuil
19. Hypo-derm′-ĭs	40. Vē′-lum
20. Lĕv-ă-tor′-ēs	
21. Mal-pig′-hĭ-an	

We may add that nu′-clē-ŭs (singular), nu′-clē-i (plural), and lar-vā (singular), lar-væ (plural) are sometimes misused as to number.

HONEY IMPORTS.

The value of honey imported into the United Kingdom during the month of October, 1906, was £3,215. — From a return furnished to the BRITISH BEE JOURNAL by the Statistical Office, H.M. Customs.

Correspondence.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

*** *In order to facilitate reference, Correspondents, when speaking of any letter or query previously inserted, will oblige by mentioning the number of the letter as well as the page on which it appears.*

AMONG THE BEES.

AT THE CONVERSAZIONE.

[6499.] I cannot but think that bee-keepers are frequently needlessly alarmed at the presence of a few suspicious cells in a comb or two in a thriving and populous hive. When we remember the immense number of eggs a queen deposits in the

course of the season, the variation of temperature so constantly inconstant in our fickle climate, the possibility of insufficient or defective nourishment, or faulty chyle-food fed to the larva, the wonder is that far more abortions are not observed. My belief is that partially digested food, deleterious matter fed in the shape of pollen or nectar, irregular feeding, or utter neglect on the part of some careless nurse bee, may account for many suspicious cells. Then, too, bees must, like man, be heirs to certain ills, small personal diseases, accounting for many deaths in the cells. All this may, at times, be made too much of and epidemics diagnosed when there is nothing of this nature present.

I am glad that a warning note has again been sounded against the too free use of carbolic in a crude or under-diluted form. The odour sticks to honey like a limpet to the rock, and nothing can eliminate its offensive smell and taste when honey is heavily tainted. I have several times lately warned bee-keepers of this serious danger. Many of them, too, who worship Lady Nicotine, apply her poisonous fumes to the bees. I do not like it. I know that when the tobacco is of the strong and vile-smelling kind, known, I think, as "bogie coil," it is positively injurious to the bees. I have seen them, after it had been puffed in at the entrance, come rolling down the flight-board dazed, stupefied, and with bodies distorted, showing evidence that they were suffering serious pain.

I have not used my "Porter" bee-escape for several years. Last year and this I have cleared all out early in the season by simply taking off the rack, when work had ceased for the day, and placing it above the coverings, leaving the bees to clear out by the cone in the roof. The plan saves a good deal of manipulative interference with the brood-nest, lightens labour, is perfectly effective, and saves bee life. When laying down the full rack, deposit it on two-inch sticks placed under each side, and no bees will be crushed, while the space back and front will act as a clearer so that the top may remain covered, thus giving practically no smell of exposed honey. Later in the season I cover the cones and allow the bees to walk down direct to the brood-nest, as formerly described.

Now, Mr. White, you surely spoke in error when you said "there was only one place from which *good* heather honey could be obtained." I think nobody made that rash statement, but many will make the true asertion that the *best* heather honey comes from north the Tweed. Your "good" honey from Surrey, which took 1st and 2nd prizes at a show, either had no genuine Highland heather honey pitted against it or the judges were incompetent—not as judges, but to assign the true positions in this particular class. Indeed, do not your own biassed words read, page 424, last paragraph, as if Highland heather honey would suffer at your hands, and that when you next judged at the Confectioners', etc., it may be written large "Nothing Scotch need apply!"

I am surprised that the Chairman and others should be surprised at the *non*-use of excluder zinc below racks of sections. I thought that its exclusion from the hive, when working for comb-honey, was the rule and not the exception. I see nothing "extraordinary" in finding no brood in sections. I never use it and yet for twenty years I have not had twenty sections spoiled with brood.

Notwithstanding what has been said I would strongly advise that there should be no feeding of bees with syrup, from October to March inclusive, unless in a case of the greatest emergency, and not even then if a comb or two of natural stores are available. It may be a question of locality to some extent, perhaps; but I know, here at least, any such feeding would lead to dysentery, and the consequent weakening, or even loss, of the stock. I never use candy, but I believe in it as the only rations fit for placing in hives in winter. Finally, I would always stipulate when ordering sugar for feeding bees it should be pure cane. I am not certain that I always get it, neither can I vouch for the fact that the grocer can really certify as to its being pure cane, but he gives me a guarantee that he has purchased it as such. A friend who ought to know informs me that Mr. Reid's statement that "the most clever analyst" cannot tell refined cane from refined beet is too extreme. He says well-known tests can easily be applied.

Suppressing Heather Honey Exhibits.—The remarks made above regarding the judging of heather honey remind me that I have "a crow to pluck" with somebody. Why do southern show authorities and judges (either or both combined) do their utmost to strangle heather exhibits? The showing of heather honey is being deliberately suppressed, smothered, annihilated, and the treatment accorded exhibits looks as if there was a desire to put this department out of existence. The attack is not a spasmodic one, but systematic and persistent, and it has been going on deliberately for years. This is no imaginary fancy of a perhaps prejudiced individual, but a simple statement of patent facts, and, as I would specially refer to the three principal London shows to substantiate my assertion, the proof or disproof is easily applied. The Grocers' are fairly consistent; but at the Dairy and Confectioners'

for the past twelve years prizes have been withheld wholesale. Indeed, it is becoming quite the fashion to grant only two out of the four prizes offered — and that rather, I think, irrespective of number of entries. Some of my notes read as follows:—"Four entries, one prize"; "seven entries, two prizes"; "six entries, three prizes"; "two prizes, 1st and 2nd, withheld." When we remember the long distance these exhibits have to travel, the cost of transit, and the difficulties exhibitors have to encounter in arranging for the staging, I think the above, which might be largely amplified, displays rather scurvy treatment as a reward for the enthusiasm which bridges over all these difficulties of distance, expense, and cold water douches.

Narrowing my point of vision to this year's shows, I find that at the Dairy seven entries of extracted heather honey got only *two* prizes, which was, apparently, the only heather honey shown. *En passant*, I may remark none of it came from Scotland. At the Grocers' an entry of twelve exhibits of heather honey sections was cold-shouldered with three prizes. Nine entries of twelve pressed heather got the same number, whereas *seven* entries granulated obtained *four* prizes; and, strange to say, the new "blended" class received the same favour. Why? At the Confectioners' for five entries two prizes were awarded to sections in this class, but for jars the same entry got four prizes. Now, as the judges at these shows were well-known and prominent bee-keepers, one or other of them might graciously give us some light on the subject. If, on the other hand, the show authorities are responsible for this niggardly policy, of withdrawing with one hand what they ostensibly bestow with the other, the sooner they recast their rules and regulations the better.—D. M. M., Banff.

MINIATURE SECTIONS.

A WORD TO EXPERIMENTERS.

[6500.] Following the short account of this experiment in B.B.J. of October 25, I have received quite a number of letters asking for further details about these small sections. If your space will permit, kindly allow me to reply to these through the B.B.J.

To start at the beginning and with the common question — Where can suitable wood be procured and how can it be made up to the required shape? This is really the bigger part of the experiment—at least, where the bee-keeper is concerned—and once got over, the rest of the business is quite trivial.

As can be imagined, the getting of the required wood in small quantities is very difficult, and to facilitate the work of intending experimenters, both as regards this trouble and also the subsequent one of making the boxes neat and to exact size, I have written the makers of the Aspen Slips, explaining the circumstances, and asking what they could do in the way of assistance. Their reply is very courteous and helpful.

As a sample lot they will make not less than twelve gross of these small boxes to the size required, and covered outside with a band of plain paper For decorative purposes this band could be coloured or printed to any pattern—so giving the finished section an attractive appearance. Unfortunately, until the makers have had some experience in the making of these boxes, they cannot name a price but promise on this sample lot to keep it as low as possible. What I would now suggest, is that all bee-keepers intending to experiment with these sections this coming season should kindly send me a post-card saying what amount they would require. A gross is a fair number for testing purposes (two would be better), and the boxes will be put up for postage in hundreds or grosses as may be found most suitable. As the minimum quantity of twelve gross must be taken, along with the fact that after the stated number is made the makers will not undertake to make more unless a very large quantity were required, it is desirable that all those wishing to have some of these boxes should send notice as soon as possible. The slips themselves cost me only 6d. a gross, so I do not anticipate the boxes coming out at more than 1s., or at the outside 1s. 6d., a gross—although I cannot guarantee this at all, but am taking for granted that makers keep the cost as low as they can.

Perhaps some reader could suggest improvements about the decorative paper bands or other matters?

As shallow-frames are (or should be) all of same size, there need be no difficulty about boxes fitting. As long as thirty-two of them are no bigger than the interior of a frame, the fitting is of small consequence.

The boxes are placed above one another —four rows of eight each—without any shelf or other support between the rows. Consequently, the joints of frames must be nailed or secured at bottom as well as at top.

For fixing the boxes into frames so that all is level and tidy, use a flat board somewhat bigger than frames, and on it nail strips of thin wood so that when frame is laid on these strips it is raised from the board a little way. Lay the boxes (previously fitted with foundation) in position, wedge in place with slips of wood (old

separators do splendidly), and all is ready. The boxes are in centre of frame, fixed tightly, and present a level surface.

Separators between the frames are, I think, necessary. Possibly tin would be better than wood, and could be cut to hang as frames do, this would be freer from buckling than thin wood. Only a bee space should be left between the separator and face of boxes as comb will then only be built to the edge of wood. Comb projecting further is not at all desirable.

As to foundation. This must be used, and far better results will be derived from the use of "full" sheets than from starters only. After cutting the foundation to size, fix it to section by pressure, using a piece of hard wood shaped as a wedge. This will be found quite sufficient, and very easily done.

These, I think, are the principal details connected with the experiment, and I now wait to hear from those of your readers who care to take advantage of the opportunity to secure boxes with the least amount of trouble. The making of them, I can say, is not exactly a joke—at least, not till one gets into the way of doing them.

I cannot say where the small bottles referred to previously can be obtained in quantities, but perhaps some reader could oblige in this respect. Since writing about these I have come across a bottle slightly smaller, and so more suitable for honey retailing, than the ones first dealt with. Possibly twelve to thirteen of them would go to the pound of honey instead of, as fomerly, ten to eleven (not *ten elevenths*, as in print), and surely with these honey could be retailed to advantage in restaurants and tea-rooms.

Apologising for this lengthy scrawl, which I have cut down as much as possible, —I am, yours truly, R. N. Robertson, "Spearshill," Tayport, N.B.

P.S.—If a small note *re* these miniature sections was put in Record, it would possibly augment the number of boxes to order from maker. I shall be pleased to have your remarks *re* the whole subject.—R. N. R.

A PAINFUL SUBJECT.

[6501.] While in bygone years our bees were occasionally prone to sting, their attentions were generally confined to my own person, and not until this season did they molest passengers on the King's highway.

With an eye to profitable increase I had invested in a few queens of some new varieties, displaying more or less brilliant markings, but only one form of temper. Since these evil spirits entered it, our once peaceful bee-garden has been turned into an inferno wherein none may enter without defensive armour.

The vicious insects' guardianship was not confined to their own respective hives, but took in the whole apiary and the vegetable garden as well, so that even the necessary cabbage for the morrow's dinner had to be secured under cover of darkness.

When fruit-picking time came the youthful helpers had perforce to pursue their labours with veil-clad faces, although this looked suspiciously like an attempt to get behind the Scriptural injunction against muzzling the ox that treadeth out the corn.

In one case a queen supplied to me as a native produced a family suspiciously Cyprian—judged by appearance and behaviour. When supering they flew at me like demons, and not content with a single target for their darts made a fell attack on the inmates of the poultry yard. Shortly after a certain individual incautiously made choice of the neighbourhood of this hive as vantage ground from which to annihilate a thievish blackbird caught sampling a bed of choice strawberries. The gunshot had unexpected results in that it brought forth something like the whole adult population of the colony in a dense mass and most militant mood. The sharpshooter had to flee the spot at a record pace, shedding hat, gun, and stick by the way, and pursued to the very doorstep by an angry host of stinging things!

While the bees were content to wreak their wrath on bipeds, feathered or otherwise, matters were scarcely viewed in a serious light, but during the closing days of the season, whether it was the heat or that the fighting units had wind of the "insurance scheme" being in temporary abeyance, something like a stinging mania set in. The first four-footed victim was a harmless, meditative donkey, placidly wending its homeward way immersed in profound thought. Perhaps the bees—exponents of the strenuous life—took exception to the leisurely gait of the long-eared one; in any case, they made a sudden and terrible onslaught that speedily brought back the dreamer from realms of philosophic doubt. The youthful drivers fled weeping, hotly pursued by a flying squadron of the enemy.

An awful fate was in store for the unfortunate animal had not the bee-man come to the rescue, and, after drawing out of the zone of fire, smote the enemy hip and thigh, it not *with*, at least *on*, the ass's jawbone, and in many other places where they were making themselves felt. This was fairly exciting, but less so than following episodes, when a pair of ponderous cart-horses had their usual funeral pace changed into a thunderous gallop by a wild charge of the stinging brigade; while the long-

suffering animal that brings us the staff of life was on different occasions so severely attacked as to require the united strength of several men to prevent a stampede!

At the time I quite failed to see any humour in the situation, being fully concerned with mending or ending the intolerable state of affairs. At the outset I shifted several colonies quite away from the roadside, giving their supers to other stocks. This improved matters somewhat, but the returning bees entered adjoining hives and stinging recommenced. Fortunately, the remainder were backed by a thick plantation, and peace was finally restored by turning the hives right round with entrances facing the obstruction, to clear which the bees had to fly high above all traffic.

I do not mean to take any risks next season, and must shift the lot to some sequestered place where their energies will find sole outlet in the legitimate work of honey-gathering.—J. M. Ellis, Ussie Valley, November 8.

HONEY SHOWS.

STAGING "FAKED" HONEY.

[6502.] As an exhibitor of nearly twenty years' standing, and the holder of sixty silver and bronze medals gained at some of the best shows in England, allow me to protest against the statement made by a correspondent in B.B.J. last week (6494, page 445), under the head of "Staging 'Faked' Honey." I have never yet seen any man clever enough to manufacture "faked" honey for a show-bench and gain prizes for what is "honey in name only." It may be possible for a dishonest man to "fake" honey for his customer that knows nothing about it, but it is quite beyond "W. H. W.," or anyone else, to beat the best samples of genuine comb or extracted honey as gathered by bees from natural sources, such as are seen on the show-benches at the large shows. If "W. H. W." doubts this statement, let him try it on at the next show, and if he does so I can promise him his exhibit will not cost him much in railway carriage upon its return journey.

But does your correspondent really think such a practice exists? Or, is he one of the class (like some others I know) who have never produced a first-rate sample of honey in their lives? These gentlemen are anxious to learn how the finest samples are secured, and take the curious way of trying to get the information by abusing those, who, after years of study, have learned how to keep the good stuff from the bad (for the bees gather both). I think we can trust friend Woodley not to be "drawn" in this way. I am very much surprised that our Editor should publish such a letter, as many consumers and buyers of honey read the B.B.J. but do not keep bees. These are the people who may believe such stuff, and to do harm to honey-producers.

I think the suggestion of "Libra" (6486, page 441) inviting suggestions for the framing of schedules for shows, and rules governing same, to be sent by exhibitors, would be very useful, because exhibitors should have some say with regard to the laws laid down therein, as they have to abide by it. If you will kindly open your columns for this purpose, it would, no doubt, remove a lot of complaints. — J. Carver, Wellington, Salop, November 12.

[Our columns are always open to receive useful suggestions from readers in the interests of bee-craft.—Eds.]

PROFIT SHARING.

LABOUR VERSUS CAPITAL.

[6503.] Replying to your correspondent "T. S.," Coventry, who writes in B.B.J. of the 8th inst. (page 449), may I be allowed to say there are a good many bees kept in this country on half shares. In the case in question, I think "T.S." should have seven of his eight stocks valued along with all his accessories, such as extra frames, extractor, etc., at a reasonable and fair valuation. The eighth stock belonging to "T. S." might reasonably go as an equivalent to the one stock of the other partner. The latter should then pay to "T. S." the amount of the valuation. From that time forward "T. S." would give his services and look after the whole business. At the end of the season the profits should be equally divided. From that time forward each partner would own one-half of the property and "T. S." would continue to give his labour. I send name for reference and sign—Cornubian, Cornwall, November 10.

WINTER FEEDING.

[6504.] I pack my bees for winter according to the advice in your monthly, The Bee-keepers' Record, viz., with a good, large, flat cake of candy on top of frames. But a friend of mine, who ignores both guide-books and experts, uses liquid food at all times and adopts the following method:—He puts on top of frames, when packing for winter, a light frame about 8 in. long, 5in. wide, and ⅜in. deep, and tacks a piece of perforated zinc over the top. This gives a good passage-way for the bees. Then the quilts have a hole sufficently large to take an ordinary feeding-bottle, taking care to have the mouth quite close to the zinc. The bees get their food by inserting their tongues through the zinc

and the calico covering of the bottle, which is easily placed and replaced without disturbing the bees or letting in any cold air.

I was present when my friend shifted his bees into clean hives in the spring, and better or stronger stocks I never expect to see.—F. J. H., Cranleigh.

SAGACIOUSNESS OF WASPS.

INTERESTING INCIDENT IN WASP-LIFE.

[6505.] Having read several reports from fellow bee-keepers of the annoyance caused to themselves and their bees by wasps, I wish to relate an incident which may arouse a little interest in these unpopular, but sagacious, insects.

On a certain day about the middle of August last, after I had been extracting honey, I left some wet combs in a small room of my house, which is not much used. The door remained ajar long enough to allow some thirty or forty wasps to gain admittance; but immediately this was discovered both window and door were tightly shut and further ingress or egress rendered impossible. Next day I visited the room with destruction and annihilation in my mind, but did not complete my task of slaying right and left, because my attention was drawn to a wasp gnawing a blotting-pad; and soon after I saw another at work, with its mandibles, on the wall-paper. Although it is well known that wasps make their nests of a soft paper-like substance, I marvelled to see them collecting material when it was impossible for them to carry it to their homes. In a short time my interest was still further increased with the discovery that on the window-blind the busy little workers had laid the foundations of a house of their own. It seemed to me that the exposure during two cold nights had caused some casualties, making the number of workers few; nevertheless, they were willing and skilful and blotting-paper was plentiful close at hand. All the remaining wasps kept hard at work until a small shelter was formed, which added to their comfort at night; and with apparently increased vigour next day the work was continued, another gallery was raised, and another, until to-day (October 6) their house appears to be complete. It is about the size and shape of half a large lemon, beautifully built of disintegrated white blotting-paper, the flat side being attached to the hanging part of the blind and the top fixed to the roller above.

There are only about half a dozen wasps left, but they seem to be perfectly happy and fly about the room, when the sun shines, in a very impertinent manner, eat the food provided for them, and retire within the portals of their warm castle at night.

My wife did not fall in with my idea of introducing a queen to the community, so they are left to live on the fat of the land in the bliss of bachelorhood. It is my belief that the wasps did not all originally belong to the same colony, as slight differences between individuals were noticed; still, they joined forces, fired with the same instinct to build, this being their only means of self-preservation. — ROBERT GREEN, Boroughbridge, October 6.

THE CHAPMAN HONEY PLANT.

ECHINOPS SPHÆROCEPHALUS.

The notification made on page 450 last week regarding free seeds of the "Chapman Honey Plant" has brought us so many applications for seed, coupled in several cases with a request for cultural directions, etc., that to save trouble on all sides we reprint the interesting description of the plant from Vol. 32, written by Mr. Walter F. Reid, in which he says:

"Some years ago, through the kindness of a brother bee-keeper, I received some seed of the "Chapman Honey Plant," which has since thriven beyond my most sanguine expectations. At the time of writing I have a veritable thicket of magnificent plants in a corner of my garden, crowded with bees, and, if not contributing materially to the honey surplus, yet undoubtedly a source of enjoyment to the bees. The plants attain a height of from 9 to 10 ft., and the profusion of flowers which they bear may be seen from the enclosed photograph of a few of the plants.

There are some minor points about the "Chapman Honey Plant" which are not generally known, and which add to its value. In the first instance, it furnishes an excellent vegetable in the early spring, and one that can be easily grown on almost any soil. The young shoots should be well blanched, like sea-kale, and cooked in a similar way. The flavour reminds one of sea-kale with slight resemblance to asparagus. A succession of shoots may be obtained through the summer by cutting down the main stems near the ground. The blanching should be complete, the least trace of green colour carrying with it a bitter taste. The stems of the mature plant are long and strong, and are very useful in the garden as supports for flowers, tomatoes, etc. The seeds germinate readily, and do not appear to be eaten by birds. Even the field mice will not touch them until germination has begun. The reason appears to be that the seed is encased in a sheaf of barbed fibres which penetrate and even traverse the tongue, producing painful sores.

The flowers not only attract bees, but also many night moths and earwigs do not

seem able to resist their seductive aroma. By tapping the heads of the flowers at night over a plate or tray containing a little petroleum the bee-keeper, who is also a florist, may diminish the number of earwigs in his garden materially. For myself, I let the earwigs live, for they are great consumers of green blight, and although they do, undoubtedly, sometimes injure flowers, yet, on the whole, I think they deserve to retain their little place in Nature's scheme."

Mr. W. Loveday gives the following cultural directions for growing the "Chapman Honey Plant":-

CHAPMAN HONEY PLANT.
(*Echinops Sphærocephalus*).

"Sow thinly in February and March, or in July and August. Plant out in open places, 4 to 5 ft. apart, as soon as the young plant measures about 3 in. across."

ODDS AND ENDS ABOUT BEES.

SOME USEFUL HINTS.

(*Continued from page* 448)

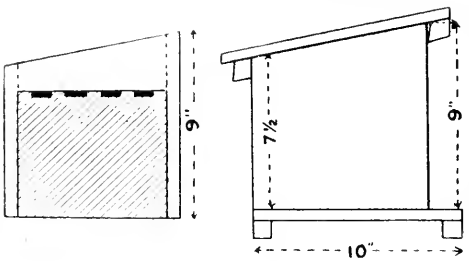
I made forty of the boxes mentioned last week, 6in. square inside measurement. I send sketches to make the construction plain. Meantime I may say they were made from white pine sarking boards, 9in. by $\frac{5}{8}$in., at 7½d. per square yard. The frames, 6in.; top-bar, $\frac{7}{8}$in. by $\frac{3}{8}$in.; the sides and bottom, 5in. by $\frac{3}{8}$in. by $\frac{1}{4}$in.; and when nailed had an inside measurement of 5in. deep and 4½in. wide. My reason for fixing upon this size was I could have three frames filled from one shallow-frame. When placed in the boxes there was a $\frac{1}{4}$in. space between the ends of frames and the body-box, and also underneath the frames. A confining-box was then made from a "Babbits' soap-powder box." The bottom was replaced by wire gauze and the top covered with cheese cloth tacked round one end and one side. The remaining sides were provided with two fillets to hold the cloth, and with a couple of sprigs so as to give ready access to the hand. In one side of the box a slit was cut to admit the "bee-shoot," or bee-chute. I am indebted to Mr. Sladen's book on "Queen-rearing" for this admirable device.

In filling the little frames I grudged to cut up beautiful shallow-frames, so I used up forty standard-frames of comb that I had cleared of pollen. This gave me thirty mating-boxes stocked ready. I filled one frame in each box as I required it with good syrup. I may here mention that 1½in. comb was left on the top-bars of the standard frames, and they were used for

swarms, as starters. For holding the young queens for a couple of days I found nothing better than Mr. Meadow's "Swarthmore" cages. And here I beg to give a hint on caging queen-cells. It is this:—Before caging the queen-cell put into the cage three newly-hatched bees. They will attend to thinning the end of the cells, and queens will hatch out successfully and strong.

My intention was to stock each mating-box with bees from a swarmed hive, six or seven days after swarming; but for my earliest queens I had to take the bees from a strong stock in the middle of a good flying day. The bees were shaken into the confining-box through the "shoot," and set in a dark place for six hours. The wired face was downwards and the box tilted up against a wall so that the bees might cluster on the fixed end of the cheese-cloth.

The stocking was done as follows:—Queens, bees, and boxes were taken into the bee-house, and the light darkened. The queen was then dropped into a cup and a card placed over it. The back frame of the mating-box was next removed and the cheese-cloth turned up and a grocer's sugar-scoop used to gather up in it about one-half its capacity full of bees. These were promptly dropped into the mating-box, as



MATING BOX.
(Inside View). (Outside View).

was also the queen; the frame was then replaced and covers carefully fixed. The entrance, 1¼in. by ⅜in., was also closed, but each box had a "cork-hole" in the bottom over which was fixed a piece of perforated zinc. Late on the following evening, the entrance was opened, and in every case the queens were accepted. For all subsequent batches I procured bees from a swarmed hive, taking care to leave as many bees as would cover any unhatched brood.

For feeding I poured a little warm syrup into the back combs twice a week, using an ordinary feeding-bottle for the purpose. In all respects these little colonies behaved like *seconds or casts*. There was no brood employed, and the many new observations I made on the behaviour of the queens should prove of great value for future guidance in the same pursuit. This letter is already too long, but if you consider the matter of consequence to your readers, I shall point out in what way almost anyone may have a few queens mated after any swarm for little or no expense.—D. VALLANCE, Dunaskin, N.B

CAPPINGS OF COMB.

By L. S. C., Ilkley, Yorks.

B.B.K.A. Report (p. 433). — During friendly discussion it occasionally happens that an interpolation occurs which has reference to a previous subject of debate. Would it not be allowable to so edit the report that such should follow the matter to which it is relative? It would certainly be better to follow.

Food for Thought (p. 434).—"From one hundred to three hundred independent fertilisations must be accomplished to produce a single strawberry!" It is more than wonderful that strawberries are so cheap. Then about "Hive Disinfection" (p. 434). Why disinfect the floorboard if it is so certain that there are no spores on it? Also with regard to "Width of Boards" (p. 435). I should say if an 8¾ in. board be thoroughly wetted it will swell to 9 in. This might meet the case and would only necessitate a daily watering of the hives.

Driven Bees (p. 435). — Some writers speak of these in such terms as would warrant a beginner in believing that they were a distinct race. Collectors must include "Apis mellifica var. Expulsa!" The question of "Driven Bees Travelling Home on Combs" (p. 436) makes one ask: Is there sufficient compensating advantage for the trouble and risk of taking for many miles of travel dozens of frames fitted with foundation, for the sole purpose of hiving the lots as driven?

Heather Honey at 6d. per lb. (p. 436).—There is certainly something wrong with this price. I am getting 1s. 3d. for my heather honey, and others report similar prices. Surely there is no need for this undercutting. The mention of "Honey from Turnips" (p. 436) makes me say I should very much like to have a pure sample of honey from this source. Would "T. W. S." very kindly describe it accurately for us?

Poor Season in Jersey (p. 437).—Has the Isle of Wight also suffered a poor season? Is it possible that there may be a connection between this matter and the strength of the recent epidemic? I have traced the source of my nomenclature, relating to "Vespa media" (p. 437) to Chambers's Encyclopædia, which gives an illustration of the nest of this wasp, but no indication that other than the British species is described. My thanks are due to Mr. Sladen for his kind informatory note.

Laying Worker or Queen (p. 438).—The

probable solution of the case is that the queen was damaged during the comb repair operation, but not killed. The bees would not, accordingly, receive another queen. The queen recovered sufficiently to lay a few eggs, but feebly and in scattered fashion, and then died. The young queens were, no doubt, reared from these eggs.

Honey in Tins (p. 439).—One large producer in the Isle of Man uses 2 lb., 1 lb., and, I think, ½ lb. tins, with apparent satisfaction. I have found that honey is sometimes tainted near a joint in tinware, but a fresh, clean surface of new tin is quite safe, and if a little cheap wax were to be run around the joint such packages might be perfect.

Patents (443).—Mr. Reid is apparently somewhat to blame if he did not make it clear in the letterpress that his design was protected. If there is value in his hive, and the patent is valid, it is to be hoped that he will put it upon the market and not keep it in the wilds to no good purpose. About "Paying Swarms" (p. 445) I would say neither of these cases is really analogous to that of an ordinary swarm purchased from a distance. That item on "Statesmanship" p. 447, last paragraph) makes me think there is a good deal of "moral" at the end of this interesting story. It is, however, a little difficult to imagine any one of our statesmen laying eggs for the nation!

Queries and Replies.

[5432.] *Bees Carrying Pollen in October.*—The students at the Diocesan Training College, York, study bee-keeping as a branch of natural history. They would be glad to have information as to the reason of the following (in their opinion) unusual phenomenon. A hive, which yielded 40 lbs. of honey, has been very quiet during September, but for the last seven or eight days the bees have exhibited nearly as much activity as in the height of the season. They seemed very busy going out and returning laden with pollen, and perhaps honey, and all seemed more excited than usual, as if they were working especially hard for some particular purpose. Your views on this point will be much appreciated. Is it trespassing too much on your kindness to also ask, what is the insect, looking very much like a bee, but larger, which visits in large numbers the Michaelmas daisy? Quite a hundred bees were searching three batches of this flower this afternoon. Thanking you in anticipation, I append name and sign—STUDENT, York, October 10.

REPLY.—1. There is nothing phenomenal in the activity of bees as described; it will probably arise through some very late bee-forage being available close by. Ivy, for instance—if flowering freely—will often restart young queens egg-laying after they have ceased ovipositing at the close of the earlier honey-season, and this would account for the activity of the bees. On the other hand, some mischance may have happened to the parent-queen, and a successor raised, which, although a worthless drone-breeder, would rouse the bees to pollen gathering if a few eggs were deposited on the combs. The stock should be examined on the first fine day to clear up this point. 2. The insect seen is probably that commonly known as the drone-fly.

[5433.] *Distance Bees Travel to Heather.*—I should like your opinion upon the enclosed sample of honey. I take it to be principally from the true ling (*Calluna vulgaris*). I have got about 160 lbs. of it, although my bees are from four to five miles away from any amount of heather. The fine autumn of this year has, no doubt, enabled the bees to make long journeys to the moors, as in 1899, when I had a similar experience. In that year I got 230 lbs. of heather honey, though as a rule my bees do not gather from the heather in any quantity. With kind regards.—W. HEAD, Brilley-on-Wye, Herefordshire, Oct. 8.

REPLY.—Your sample is a good heather-blend, and the bees have evidently worked on the true ling. It is a curious fact that such honey has been gathered this year in many places far away from the moors.

[5434.] *Building up Stocks from Driven Bees.*—Kindly reply to the following queries:—Two of my colonies are built up from two driven lots. The united lots of bees were hived respectively on September 10 last, and having no stores to spare I gave them combs partly filled with what I thought was pollen, taken from a stock headed by a fertile worker. The combs were removed five days previously and thoroughly well washed with Izal. One of these combs I did not at the time utilise, and on cutting this comb up fourteen days later I found in it a quantity of chilled brood. As I am not certain that the other combs did not also contain brood and that it might be chilled (though none of the latter was thrown out of the two hives), I am naturally full of apprehension as to foul brood appearing in the spring. I therefore ask: 1. Is my fear well founded? 2. If so, can anything be done now to prevent it? The bees took down a fair quantity of syrup up to October 1, and are provided with cakes of candy on top of feed-hole. Being fed late they were troubled by robbers, so I "clausterised" them. 3. With regard to this latter operation, will you kindly state if the whole entrance should be left open? It is ¾ in. deep by 12 in. wide.—SIGMA, Scarborough, November 8.

REPLY.—1. There is very little cause for alarm after the precaution you have taken. 2. Nothing can be done beyond using ordinary preventives. 3. We do not quite know what is meant by your term "clausterised," and, in consequence, cannot reply to this query.

[5435.] *Glucose for Bee-Candy.*—I should feel obliged if you would say in next issue of the B.B.J. whether glucose, used in the particular form of breweries, of which the accom-

panying is a specimen, is suitable for use as a winter bee-candy? Name enclosed for reference.—SEWARD, Bath, November 9.

REPLY.—The saccharine used in glucose by brewers might induce bees to take it as food, but we strongly advise you not to use it for that purpose. We should on no account give it to bees as winter food.

[3456.] *Unfinished Sections.*—Owing to the sudden close of the heather honey-flow in this district, I have on hand ninety sections about half-filled with heather honey. They are still in the racks undisturbed, it being my intention to put them back on the hives intact when supering next year. On page 176 of the RECORD there is a paragraph headed "Bait Sections," in which Mr. Doolittle is quoted on the subject. Since reading his opinion as to the removal of the old honey before new honey is stored, I have been in doubt as to whether I should adhere to my intention, or simply press the honey from the combs now, and melt the wax. Of course, I am loath to lose so many drawn-out sections, and would prefer to keep them if you think it would be an advantage to do so. I shall be much obliged for your advice on the matter in an early issue of the B.B.J. Thanking you in advance, I send name for reference and sign—HEATHER SECTION, Strachur, by Greenock, November 8.

REPLY.—Unless you have a convenient place in which to store the sections for winter—*i.e.*, where they could be kept at an even temperature of about 65 deg. F., we should press the honey out for sale without delay. This would be the safest course in any case, as heather honey is now in good demand, and "a bird in the hand is worth two in the bush."

Notices to Correspondents & Inquirers

POTSEY (Weymouth).—Moving Hives.—We advise you to defer removing "ten hives 54 yards" till the bees have been kept indoors by cold weather for a couple of weeks or more at one spell.

E. BALLARD (Wor-shire).—Bee-Candy.—You have erred somewhere in carrying out directions in "Guide Book." Sample is hard as stone, and, in consequence, quite unfit for bee-food in winter.

F. A. YOUNG (Diss).—Bee Nomenclature.—The queen bee sent is apparently young, and of the ordinary brown or native variety. The worker bee shows slight traces of Carniolan blood, but not at all marked.

B. E. B. (West Ealing).—Old Bee Books.—Bagster's work on "The Management of Bees" (1838) is by no means rare; indeed it may be picked up sometimes at second-hand bookstalls for about a shilling.

FRANCIS (Torquay).—Bro. Columban's Bee-Candy.—You must have failed lamentably in some essential detail to produce only a thick, clear syrup (as sample) when making soft candy. To us it appears as if only par-boiled. If the pan was on for double the time stated by Bro. Columban we should say it must have boiled slowly, instead of keeping it on a hot fire and boiling briskly all the time. You will have to try again; and if you do and report to us, please quote page of B.B.J. on which the recipe followed appears.

Suspected Comb.

J. L. J. (Maidstone).—Sorry to say the comb is affected with foul brood of pronounced type.

Honey Samples.

W. G. (Leek).—Your sample No. 1 (mainly from clover) is bright and very good in colour and consistency, but it is beginning to granulate. The flavour is a bit spoilt by the bees having gathered from some source unknown to us. No. 2 is somewhat similar in quality, but rather thin. Both are quite suitable for table use.

R. E. (Amlwch).—Both samples are very suitable for showing in different classes, No. 1 being a capital sample for a heather-blend class. It is from clover and heather. No. 2 is equally good for staging in the ordinary or light class, being good on all points. Replying to your other query we may say loaf sugar (pure cane) is the best for use in making bee-candy.

R. BAYLEY (Plymouth).—The two sample sections of honey sent no doubt left your hands in clean, good condition—one from clover, the other from heather—and the box was too well made to suffer from rough handling and leakage in parcels post, but the honey and comb were completely smashed out of sections and in liquid form in bottom of box. It formed a capital "heather-blend" honey, and, as such, is being used for our own table. This is the only expression of our opinion as to quality that we can offer in reply to your request.

Special Prepaid Advertisements.

Twelve words and under Sixpence: for every additional Three words or under, One Penny.

GOOD HONEY, 28 lb. tins, 6d. per lb.—GEO. THOMPSON, "Beecroft," Helpringham, Lincolnshire. U 49

NO CAPITAL REQUIRED.—Lady wanted to manage and extend bee keeping on poultry farm in return for half profits. Small charge for board.—TILPHAN POULTRY FARM, Bulphan, Essex. U 31

FOR Sale, SECTIONS, first quality, 2s. dozen.—D. EVANS, Crossing, Abergwili, Carmarthen. U 32

WANTED, HONEY EXTRACTOR. Exchange concertina, new; lock-up case; worth 30s.—WILLIAMS, Bootmaker, St. Briavels. U 30

FINEST EXTRACTED HONEY, 14s. per 28 lb. tin. Sample, 2d.—DUTTON, Terling, Essex. U 29

FIRST PRIZE NORTHAMPTONSHIRE HONEY, 28 lb. tins, 14s. 6d. CHAS. WELLS, Oxendon, Market Harboro'.

A GRAND, DARK, BRINDLE, UPSTANDING LURCHER DOG, 2 years, good worker, will catch hare. Exchange for healthy bees or appliances; sell £2. Also (for cash) a splendid working white bitch ferret, quiet to handle, 7s. 6d., and her two dog young ones, ready for work, 5s. each. HELLARD, John Street, Bridgwater, Somerset. U 27

TWO NEW, WELL MADE, PAINTED BAR-FRAME HIVES, with healthy stocks, Queen excluders, and smoker, 15s. each; also good stock in skep, 7s. 6d. Owner giving up. "D.," "Westholme," Wilton, Wilts U 26

PURE CORNISH HONEY for sale, 3 or 4 cwt.; good quality. What offers?—A. L. PERRING, Polstrong, Camborne, Cornwall. U 25

Editorial, Notices, &c.

BRITISH BEE-KEEPERS' ASSOCIATION

The monthly meeting of the Council was held on Thursday, November 15, at 105, Jermyn Street, S.W., Mr. T. I. Weston occupying the chair. There were also present Messrs. R. T. Andrews, W. Broughton Carr, J. B. Lamb, W. F. Reid, E. Walker, and the Secretary. Apologies for inability to attend were read from Mr. T. W. Cowan, Mr. D. W. B. Ackerman, Mr. T. Bevan, Dr. Elliot, Mr. W. H. Harris, and Mr. R. Godson.

The minutes of the previous meeting were read and confirmed.

Three new members were elected, viz. :—

Mr. P. Boxwell, 36, Beresford Road, Canonbury, N.

Mrs. A. Gale, Rayne Place, near Braintree, Essex.

Miss B. Sinckler, 4, Edith Road, Kensington, W.

The Finance Committee's report was presented by Mr. T. I. Weston, and duly adopted.

A report upon a recent examination in Cambridgeshire was presented, and on the examiner's recommendation it was resolved to award a third-class certificate to Mr. T. W. Softley.

It was announced that eighteen candidates' names had been sent in for the second-class examination on Friday and Saturday, November 16 and 17. A list of "supervisors" nominated was submitted and formally approved.

The draft schedule of prizes for the honey department of the "Royal" Show at Lincoln, in June, 1907, was prepared for submission to the R.A.S.E. The Council gladly learned that the Lincolnshire B.K. Association would co-operate heartily in endeavouring to secure the success of the show, and that probably "local classes" would be instituted.

The next meeting of the Council will be held on December 20.

REVIEWS.

The Bee-Master of Warrilow. By Tickner Edwardes (London: The *Pall Mall* Press, 2s. net). — The author is a well-known writer on rural subjects, and romantic articles on bees and bee-keeping, which have appeared in magazines and newspapers. In the eleven chapters of this little book he has produced some delightful stories in connection with bee-keeping which will be found most interesting, even to those who do not keep bees. Mr. Edwardes introduces us to a type of bee-keeper not frequently met with in England. We certainly do not often come across three or four hundred hives in one apiary in this country, yet the author ventures to introduce us to such an one to be found in a village in Sussex. "Warrilow" is the name given to it, and we are left to guess—from the description and photographic illustrations—where it is to be found. The bee-master of Warrilow is a type of one of that class of old men who, though born and bred amongst the hives and steeped from his earliest years in the lore of his skeppist forefathers, is, nevertheless, imbued with the spirit of progress, holds decided opinions, and while conservative is progressive. There is nothing new about bee-management that is not tried, and adopted if useful and practicable, or quietly discarded if there is nothing but novelty to recommend it. In the opening chapter we are introduced to the bee-master of Warrilow, whom we meet, with gun on his shoulder, in his garden on a fine day in winter when the ground is covered with snow and the blue-tits are busy luring the bees to their destruction, and we can easily picture the scene so vividly described. After forty years' experience with bees the bee-master has naturally some ideas to give us, and amongst other quaintly wise sayings he cautions us to "beware the foreign feminine element," and he adds, "stick to the good old English black," which he considers "is a more generous honey-maker in indifferent seasons, comes from a hardy northern race, and stands the ups and downs of the British winter better than any of the fantastic yellow-girded crew from overseas." We follow chapter after chapter with absorbing interest and are given details of a whole year's work on a bee farm. In the chapter "A Bee-man of the Forties" we are reminded of Virgil's Fourth Georgic with its ancient praise of the goodness of a garden, and Mr. Edwardes gives us a charmingly graphic description of one :— "Coming into the old garden from the glare of the dusty road the hives themselves were the last thing to rivet attention. As you went up the shady moss-grown path, perhaps the first impression you became generally conscious of was the slow, dim quiet of the place—a quiet that had in it all the essentials of silence, and yet was really made up of a myriad blended sounds. Then the sheer carmine of the tulips, in the sunny vista beyond the orchard, came upon you like a trumpet-note through the shadowy aisles of the trees; and after this, in turn, the flaming amber of the marigolds, broad zones of forget-me-nots, like strips of the blue sky fallen, snow-drifts of arabis and starwort, purple pansy-spangles veering to every breeze. And last of all you became gradually aware

that every bright nook or shade-dappled corner round you had its nestling beeskep, half hidden in the general riot of blossom, yet marked by the steadier, deeper song of the homing bees."

The technical details of modern bee-keeping are carefully interwoven in the narrative. The book is as interesting to women as it is to men, for in the chapter "Chloe among the Bees" we are introduced to the bee-mistress, who shows what she is doing in the country to benefit young women by inducing them to take up the pursuit of bee-keeping in the pure air and quiet of the countryside. She compares it to other rural pursuits and says, "bee-keeping is clean, clever, humanising open-air work—essentially women's work all through." Without advising its use as a text-book on practical bee-keeping, we can with pleasure recommend our readers to procure this little volume, feeling sure they will thoroughly enjoy it even if they have already perused the articles that appeared in the *Pall Mall Gazette* from the same writer a couple of years or so ago. As a gift book for the coming Christmas season it will be eagerly read by young or old in whom we wish to arouse interest in "that busy little labourer, the honey-bee."

Correspondence.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

Communications relating to the literary department, reports of Associations, Shows, Meetings, Echoes, Queries, Books for Review, &c., must be addressed only to "THE EDITORS of the 'British Bee Journal,' 8, *Henrietta-street, Covent Garden, London, W.C.*" *All business communications relating to advertisements, &c., must be addressed to* "THE MANAGER, 'British Bee Journal,' *Office*, 8, *Henrietta-Street, Covent Garden, London, W.C.*"

*** *In order to facilitate reference, Correspondents, when speaking of any letter or query previously inserted, will oblige by mentioning the number of the letter as well as the page on which it appears.*

NOTES BY THE WAY.

[6506.] The weather continues mild. So far, we have had no frosts. Dahlias are still in full bloom, and vegetable marrows continue growing, but the last bee-forage of the year (the ivy) is over, and with colder weather our bees will be confined to winter quarters. Referring to the question of "clearing up extracted combs" at the late Conversazione, I was somewhat surprised that the wise heads of our craft should occupy time in considering any such method as travelling from hive to super in a collateral box, when most of them must have used that simple good old way of placing the extracted sections or combs it is desired to have cleared out back into rack or box, and then in the evening place the same over the first quilt and wrap up carefully, so that no bees can find an entrance from the outside. If this is done they will find in a day or two the combs cleaned out as dry as paper. I always put eighteen sections (after extracting) in a rack holding twenty-one. I do this because all my racks are made with the wood "slats" on which the sections rest, so that if I put twenty-one to be cleared out the bees would only be able to reach the centre row, but with eighteen only there is room for the bees to get to all parts. Sometimes I place a super-clearer—with the escape removed—on top of quilt (in every case the feed-hole in quilt is open). The wet combs are then put on top of "clearer," and, of course, well wrapped up. I have never had a case of "robbing" start through these annual clearings-up.

Miniature Sections.—I trust—for the welfare of bee-keepers—that such small sections, holding one or two ounces of comb-honey, may never grow into market demand. Possibly if sold at 1d. each for 1 oz. section an expert bee-keeper may make it pay, but at 6d. to 8d. per lb.—*i.e.*, ½d. per 1 oz. for sections—I feel sure it will spell financial ruin to anyone who attempts to make a living in producing these sweet morsels.

I have one customer who requires honey in small jars, holding 2oz. and 4oz., and he tells me that honey sells freely in these small sizes, but the cost of jars and honey is too high for there to be any profit in filling them to sell at a popular price. Even the so-called ½-lb. jar—which I find holds 9 oz. when only filled to the shoulder—does not pay the bee-keeper to put up wholesale, for the retailer who sells them at 6d. each. It pays better to put your honey up in 28-lb. tins and sell at 56s. per cwt. on rail. For a sixpenny jar we want one that holds about 7 oz. This size would take 5 lb. 4 oz. of honey to fill one dozen; 31 jars labelled 1d. each (1s. per dozen) would leave a working margin at 4s. 6d. per dozen, but with the present jar holding 9 oz., it spells ruin for anyone to supply them full of honey to sell at 6d. each retail, when the retailer's profit is deducted.

I notice your correspondent "Expert" (6472, page 426), refers to jam being dearer this year. My son, who is a grocer, told me yesterday he was selling 2-lb. jars of jam at 6½d. each. I do not think our honey at 10d. to 1s. per jar will compete successfully with jam. Indeed, I have always considered honey a table delicacy, and not a standard food of the people, like jam or marmalade or even golden syrup.—W. WOODLEY, Beedon, Newbury.

PRONUNCIATION OF BEE-WORDS.

THE LONG AND THE SHORT OF IT.

[6507.] In spite of my anonymous fellow-councillor's attempt to obviate criticism, I must, with regret, find fault with No. 5 on his pronunciation list, "Bacillus alvē'-i" as it appears on page 451 of last week's issue B.B.J. A man should have the courage of his opinions, and, as I have already on page 353, Vol. XXXI., emphatically advocated a different pronunciation, I feel bound now to take up the cudgels. My words were:—"In *alvei* the stress is on the first syllable, and the *al* is sounded as in *alcohol*. The *e* is quite short, and the word might be rendered in English *alveyi*; not on any account *alvee'i*." I should not have included *alveus* in my article above-mentioned if I had not been aware that bee-men sometimes do pronounce it in what seems to me an astounding fashion; but so positive am I of my friend and opponent's *alvē'-i* being wrong that if after reading my explanation he remains unsatisfied I will gladly leave the decision to any respectable teacher of classics — even elementary classics — to whom he may please to make reference.

Alveus, sometimes alvus, was pure Latin for "a hollow"; hence it came to mean a hollow vessel, a ship, or a bee-hive. There are a few such substantives with this ending, as *calĕcus*, a slipper; *cāsĕus*, cheese; and the familiar *nuclĕus*. Adjectives are more common, as *aurĕus*, golden; *argen'tĕus*, silvern; *spontan'ĕus*, etc. All of either kind have the short penultimate *e*, except a very few words taken from the Greek; as *epilēus*, a kind of hawk; *gigantēus*, gigantic. In its various meanings *alveus* occurs here and there in Latin poetry, and in every instance the *e* is metrically short.

Bee-keeping brethren who chance to come across a puzzling Latin word may profit by the general rule that when two vowels come together the first is short and bears no stress. Thus the Latin for bee-house is *alvĕārium* with the main stress on the second *a*; that for a well-known heath is *Erica cĭnĕrĕa*, and here the distinguishing adjective has every vowel short and the stress is on the second syllable; *cinĕr'-ĕa* not *ciner-ē'a*. In the case of the other well-known heath, *E. tetrălix* the stress is on the first syllable; *tet'-răl-ix* not *tetrā'-lix*. Erica is generally pronounced *er'-ĭca*, although according to its Greek derivation the *i* should be long. There is no doubt as to the proper pronunciation of the specific adjectives.

Latin is a dead language, and can no longer vary. In the pronunciation of the vowels we English stand alone, though there are signs of improvement; there is some quarrel as to hardening a consonant; but the metrical value of syllables is fixed in the immortal verse of Latin poets, and can be ascertained by consulting a good dictionary. Deal gently, brother bee-man, with the tongue in which Virgil wrote the Fourth Georgic, noblest of bee-poems.

Returning for a moment to the list, please note that No. 8, chitine, is from a Greek word chitōn, meaning a tunic or cuirass, and was first transferred without change to his own language by a Frenchman. The *ch* in our form of it is not pronounced soft, as would appear from the list, but hard, as kitin. In the same way chyle, another word of Greek origin occurring in our text-books, though in the list, must be pronounced kyle.—H. J. O. WALKER, Lieut-Colonel, Leeford, Budleigh-Salterton.

LONDON SHOWS.

SUPPRESSING HEATHER HONEY EXHIBITS.

[6508.] What wasp has got into "D. M. M.'s" bonnet that has made him write so wildly in this week's B.B.J. under a heading "Suppressing Heather Honey Exhibits"? He accuses the Southern show authorities and judges of all manner of wickedness *re* heather honey, when, in truth, he should have fallen with a big stick on the backs of his negligent compatriots. It is admitted that prizes are offered and classes provided specially for heather honey. That of itself is surely evidence sufficient to prove goodwill, and naturally having provided the printing, prizes, staging, and attendant to unpack, stage, and repack the exhibits, the Exhibition Committee earnestly desire to find the classes well filled with entries. It may be asked, What is meant by "well filled"? and answered, That a class so important as "comb heather honey," open to the whole kingdom, should have at least a dozen entries, and to be well filled twenty and upwards. But what are the facts. Let "D. M. M.'s" own "Notes" provide the answer, "four entries," "seven entries," "six entries." What a beggarly response to the invitation to compete! When at last it came to "two prizes, 1st and 2nd withheld," because the exhibits sent in were not worthy of a 1st, it was considered high time to apply the prize money to a better purpose, and the dark honey "heather mixture" class is the outcome and will prove a success. Where are the Scotchmen with their grand heather honey from "ayont the Tweed"? Echo answers, "Where?"

They certainly do not send it south for the Londoner to admire; indeed, like the mythical Mrs. Harris, one is tempted to

exclaim, "there ain't no sich stuff." No, the fault lies with the men who will not be tempted to exhibit, not with those who year after year have been disappointed with the poor response to their invitation.

Had "D. M. M.'s" visual organ been at the Dairy Show this year, he would have found that the 1st prize for comb-honey was won by an exhibit of heather sections from a Midland county—a fine example both of honey and bee-keeping.

Again "D. M. M." writes of "cold shouldering" and "niggardly policy," yet he gives figures which prove that a total of thirty-eight entries were rewarded with sixteen prizes! What more could any reasonable man want; indeed, in London the liberality of the managers of the Grocers' and Confectioners' shows is considered to be very poorly responded to by the heather-honey fraternity, so instead of bringing railing accusations against the brethren down south, will friend "D. M. M." kindly explain in what way the assistance and co-operation of the brethren ayont the Tweed can be obtained? By so doing he will very much oblige.—T. I. WESTON, Hook, Winchfield.

THE B.B.K.A. CONVERSAZIONE.

[6509.] Your correspondent "D. M. M.," among other interesting information on page 452, refers to "well-known tests that can easily be applied" to distinguish refined cane from refined beet sugar. Will he be good enough to ascertain from his friend "who ought to know," one or two of these tests and send them to you for publication? As "D. M. M." acknowledges that neither his grocer nor himself can distinguish between the two varieties, the information would be of general interest to your readers.

In your report of the Conversazione I am made to say that "if blotting-paper be burnt, pure cellulose would be produced." My reference to blotting-paper was to the effect that it was in itself a pure form of cellulose. On page 422 the "pin-wire" should be "piano-wire," its stenographic cousin.

On the subject of small sections, or rather samples, of comb-honey, these are in common use in the United States. They are made in the same way as ordinary sections, and, with the name and address of the bee-keeper upon them, form very attractive advertisements for an apiary. The idea is certainly one that should be developed in this country, and I hope British appliance makers will be able to produce these miniature sections as suggested by Mr. R. N. Robertson.—WALTER F. REID, Fieldside, Addlestone, Surrey, November 17.

SOME BEE-NOTES.

PLEASANT AND "OTHERWISE."

[6510.] Referring to the article on pronunciation of bee-words in last week's B.B.J.—No. 37 in the list on page 451—the word trachea is quite correct if pronounced trăk-keiă, but I never heard it pronounced tarykee'ah, although that may be correct.

The article written by D. Vallance, entitled "Odds and Ends About Bees," (pages 448 and 457) is, to my mind, a very good and practical one. Users of this system must see that they shake sufficient bees into the mating-boxes, in order to keep queen larvæ warm in this variable climate. I would also destroy any queen-cells that are not fine and large. My hobby has been queen-rearing, but I have never sold a queen, so I am not advertising my own goods. Referring to the first part of this letter, there is one thing I should like to point out—*i.e.*, strictly speaking, this is not queen-breeding. Mr. Vallance rather hits at queen-breeders' prices.

The reason why a queen-breeder charges more than it costs bee-keepers to rear a queen at home is this:—A queen-breeder has to be continually introducing fresh blood (breeding queens) to prevent the queens he sells being inbred. The progeny of some queens so purchased do not prove up to his standard, consequently he has to destroy them, and this means a big loss—choice breeding-queens being expensive. By all means let every bee-keeper breed his own queens, but to prevent inbreeding he must buy a good queen from some reliable breeder, and let the daughters of this queen mate with drones from his best stock.

I am certain that bee-keepers often forget to look at this matter in a proper light, and so because queen-rearers and not breeders.

If you go to a farmer he will tell you that he does not rear the sires for his flocks because of wishing to avoid inbreeding. Why should bee-keepers act differently?

I must confess to having missed this point myself at one time, but since I have worked on the lines now indicated my takes of honey have been about doubled.

A large number of bee-keepers destroy their queens after they are a year old. Why? We had a bad season here this year, but one colony headed by a three-year-old queen has given me 180lb. of extracted honey. I put her in a nucleus April 7, and gave her every advantage. Kept feeding the stock right up to the first week in June, and as I had put the hive in the other side of a clover field the bees had their forage

close to their hive entrance. This stock also gathered a large quantity of honey in the fall as well as in summer-time, and that is what brought the weight of surplus so much in excess of what other stocks did. I took the last lot of honey off in September.

Those bee-keepers who own only four or five stocks will find it *pay* better to buy untested queens from a breeder who can guarantee delivery of good queens, and if one has plenty of cash and honey is the only object, then I should say buy all your queens, and buy untested ones, or virgins, so long as your stocks are pure.

Now for a different tale:—There is an old story round here that if a swarm is going away, they can be brought down by firing a gun somewhere near them. Our gardener came running in, crying, "Master, Master, run and get your gun, the swarm's going away!" The gun was duly brought and fired, and, sure enough, "like a shot," those bees came down in a hurry, and in such a hurry, too. But the swarm was only hived after many stings, and it was utterly impossible to go anywhere within a hundred yards of them for the rest of the summer. On very hot days the bees "went for" anybody and anything quite a long way off; but, strange to say, they were quiet enough the next season, and so I say to Mr. Ellis, "Do not fire a gun in an apiary." The concussion of the air is unpleasant to human beings, how much more so to bees!

Your readers may have a laugh when I tell you that the chief reason for keeping down bracken round the hives in one out-apiary is that the little English viper is in the bracken, one man in the neighbourhood dying from the bite of one this season. I used never to bother about them prior to this event, as I have killed one by jumping on it, but now always wear leggings. I must thank both those correspondents who gave me "tips" for killing bracken. — Arts, Pembrokeshire, November 17.

A BEE-NOTE FROM MEXICO.

[6511.] I beg to thank you for your reminder, just to hand, of my carelessness in allowing my subscription to your very interesting Journal to run out, and now have the pleasure of enclosing postal draft for a further six months' subscription.

Although the B.B.J. is not of so much assistance to bee-keepers here, by reason of the tropical climate, yet it serves to remind me of Old England, and I am pleased to see that some of your correspondents are sticking up for the good old English brown bee. I have kept them in Australia, and have them here, and a quieter bee I do not desire; as to veil or gloves I have no use for them. Name enclosed for reference.—F. W. B., Chinipas, Chihuahua, Mexico, October 16, 1906.

THE HONEY HARVEST OF 1906.

AN EXPERT'S REPORT.

[6512.] Very few have better advantages of knowing and comparing results of honey harvest than the touring expert. In my travels I have found great variety of crops, but taking all into consideration the season has been good, and in many instances "record" honey-yields have been secured. Below I give you some reports I have received which may probably interest your readers. What does your correspondent "A.H.," Wavendon, say to a yield of fifty sections from a late June swarm in Suffolk, besides providing itself with sufficient stores for winter? Another report shows ninety sections and 30 lb. of extracted honey from a stock slightly diseased in spring. While again a report gives results from fourteen hives (spring count) of 904 sections and 907 lb. of extracted honey, an average of 129 per hive, with one stock increase. While another report brings up the grand total of 210 lb. from a single stock of the despised English "blacks." Who desires better than this?

While writing, I hope your correspondent, the Rev. H. Newman, will take it in good part if I crack a nut with him as to what he says about experts (p. 426, 6473) to the effect that he has never allowed an expert to examine his hives for fear of infection from neighbouring apiaries. Now, I venture to say this is very misleading, as it seems to give the impression that experts must be reeking with spores of foul brood, and that experts generally have lost a certain amount of self respect, and carry about with them and introduce foul brood from one apiary to another. Who can wonder at a cottager refusing inspection who happens to hear of a report like this? I grant it is not wise to allow any so-called expert to dabble with your bees, but any duly qualified man must know the need for disinfection after handling foul-broody lots. Then again we much-abused experts are told by another correspondent (6488, page 442) who complains that instead of increasing the number of honey-producers we ought to popularise honey as an article of food. Granted, but at present I think it is the duty of the producer himself to do this. Our duty, as far as I understand it, is to try and make better bee-keepers, and I have not found any business-like bee-keepers who cannot find a market. I think it a lack

of pluck on the part of the producer in taking first-hand what is offered him. — J. PRICE, Staffs, Second-class Expert.

CLEARING POLLEN-CLOGGED COMBS.

[6513.] At the Conversazione Mr. Arthur Peach (page 433) speaks of a method of clearing combs of pollen by cutting them away down to the mid-rib, and asks if this plan has been adopted by anyone in this country. For an answer to this he might be referred to the B.B.J. for the year 1900 (page 480) and I think he will admit that it has. See letter headed "A New Use for the 'W. B. C.' Uncapping Knife." I thought it might just interest you to have this pointed out, and it is a most expeditious method. In a few seconds a frame can be cleared of the undesired pollen, and practically *sans cérémonie*.—T. W. WHITE, Walthamstow.

HONEY SHOWS.

HONEY IN NAME ONLY.

[6514.] The sense in which I used the above term in my previous letter (6494, page 445) is easily explained. Honey is "a mixture of different sugars known as glucose and a small quantity of cane sugar and non-saccharine material, and contains 25 per cent. of water." This is the natural composition. The object of "faking" is to change this composition, and, if this is done, the word honey then becomes a misnomer, and the article is, as I described it, viz., "honey in name only." We may christen it as we like, but it has no more claim to the term "honey" than candy has to be called syrup.

Your correspondent Mr. J. Carver (page 445) has evidently misread my letter. I said nothing about "manufactured" honey, and as this seems to be the object of his wrath, his hysterical outburst does not call for further notice.—W. H. W., Beds, November 17.

RENDERING BEESWAX.

[6515.] Are brothers of the craft aware that for rendering beeswax they use such modern contrivances as the "Gerster" extractor only, at a great loss to themselves, as a little experimenting will soon convince them? In proof of this statement let me refer your readers to the article in B.B.J. of November 8 last (page 444), where "A Staffordshire Bee-man" gets 8 lb. of wax from thirty-four old combs by the old-fashioned process of boiling in a bag! Whether this be a record or no, I challenge anyone to obtain anything approaching that proportion by the use of a "Gerster." These modern contrivances may earn good marks for cleanliness, but they do not extract the wax. Just squeeze the refuse from a "Gerster" and see how much wax runs out. Personally I discarded this appliance years ago, and usually boil my combs on the fire and pour into cheese-cloth and squeeze. This does not require such large receptacles as boiling in a bag weighted down.—BUZBEE, Bassingbourn, November 19.

BEE-SHOWS TO COME.

[6516.] The Baroness Burdett-Coutts, President of the B.B.K. Association, having kindly decided to allow us to have a competition for her prize hive in connection with our next annual meeting in February, 1907, at the Scientific Society's Rooms, Preston, we have decided to supplement the prize hive with the following prizes, viz.: 1st, Baroness Burdett-Coutts's prize hive; 2nd, Roots's "A.B.C. of Bee-keeping"; 3rd, Cowan's "Guide Book" or "Honey-Bee"; 4th, bound volume of *Bee-keepers' Record*; 5th, "Modern Bee-keeping."

The competition is for two 1-lb. jars of extracted honey (open to the cottage members of the L.B.K. Association). No entry fees. Entries to be sent to me not later than February 1, 1907—JAMES W. BOLD, Hon. Secretary, Lancashire B.K.A., Almonds Green, West Derby, Liverpool, November 20.

AMERICAN AND COLONIAL PAPERS.

EXTRACTS AND COMMENTS.

By D. M. Macdonald, Banff.

Gold from Bees.—"No, there is no big profit in the bee-business. But when it comes to a fascinating, health-giving, and enjoyable pursuit which will give any energetic man or woman a comfortable living, our pursuit need take no back seat for anything in the world. If, however, you mean to make a success of the business, you must have a real love for it." This is G. M. Doolittle's opinion, and I say, Amen!

Golden Bees.—"A prominent business man of Pottstown, who has suffered for years, was stung eight times by Pratt's golden clover bees, which are the kind exclusively used for the rheumatic cure." This remarkable sentence appears in an American bee-journal, and the editor thinks "Perhaps it is something of a joke."

Perpendicular Wiring.—C. H. Howard bought hives with perpendicular wiring and found combs built clear down to the bottom-bar. Dr. C. C. Miller, on the contrary, had some 3,000 combs with perpendicular wiring, and the bees built to the bottom-bar no better than with the horizontal wiring. Mr. E. Root again holds

that "perpendicular wiring will permit of the foundation reaching from the top down to the bottom-bar, while with horizontal this would not be possible without danger of buckling." I do not know. Perhaps some of our B.B.J. readers will give their experience.

Unfinished Sections.—"Plan your work"—says Mr. J. A. Green—"so that you will not have a great lot of unfinished sections at the close of the season. If you cannot use extracting combs to finish the season, fill the supers you put on after a certain date only half-full of sections, unless the conditions fully warrant you in giving more room." This year the season in our part of Scotland was so fine near its close that I continued to place on sections; but, as all racks were placed on above, the percentage of uncompleted sections was not high. Many sheets of foundation, however, were drawn out, when without their presence bees would do a good bit of loafing. I think the "combined" system would come in handy at the close of the season.

Sheep in the Apiary.—Mr. J. A. Green, in *Gleanings*, says:—"I got a couple of sheep to keep down the grass. They fed in the apiary, but were able to run for shelter if the bees proved troublesome, and they soon learned to do so. Since then the apiary has been kept free from grass and weeds." Too many should not be allowed entrance, as they "bunch" and do harm. That reminds me that I saw sheep this season feeding among quite thirty hives, but they had room to shelter if bees annoyed them.

Colour and Bees' Temper. — Dr. C. C. Miller can give a whole lot of positive proofs to controvert a recent contention of mine (in another journal) that bees' temper does not depend on colour. The genial doctor rather gives himself away in the one instance he submits. "The bees"—he says—"'peppered' the coloured shirt; they ignored the white one." Was it not rather a question of "odour"? Now my arguments were positive that dark clothing does not make a whit of difference. Yet in the *Canadian Bee Journal* Mr. Byer holds it does; and now Mr. Root backs up Dr. Miller. Here again, I think, the "odour theory" explains the whole mystery. A *light* hat, never mind the colour, causes less perspiration!

"Is 'Bunkum' Unparliamentary Language?—The query comes from far-away Australia, and the querist is the editor of the *Australian Bee Bulletin*. As the said "editing" embraces 95 per cent. of work done with the scissors and paste we may perhaps excuse the cloudiness of intellect which generated the question. The English dictionary—and Mr. Tupper would have been wise to have consulted such an excellent authority first hand — defines bunkum as "speaking for speaking sake," and this describes the case under review perfectly, so I only called a spade a spade. Mr. Tupper ingenuously designates me as "a Mr. Macdonald from Banf" (phonetic for Banff, perhaps,). That little *a* implies that my name is unknown to this Austral editor; but, when readers are made aware by the fact that for years his *Bulletin* rarely appears without several extracts from my articles in English and Irish papers, and that this editor, who knows me not, unblushingly reproduces whole articles of mine, his pretended ignorance smacks somewhat of ingratitude.

Introducing Queens.—In the *Australian Bee-keeper* we find a novice, who never before introduced a queen, nor had seen it done by anyone else, relating his mode of procedure. He found it impossible to find the old queens in his populous hives, so he proceeded to divide by simply shifting the old hives to a new site, placing a new one on the original stand, into which he returned all the frames of sealed brood. Here he had a queenless lot of bees with no means of rearing a young queen; field-bees intent on honey-foraging, and plenty of young bees, all in the best frame of mind to accept any queen offered them. Perhaps it would be quite safe to give such colonies even valuable queens without caging them, and at once. I think I would risk it, but our novice was more cautious. In the first place he left the bees queenless until they knew it, and even then used queen-cages, leaving the bees unmolested for several days. All his batch of thirty-two queens were accepted. He not only doubled his colonies but had a good "take" of honey. The Editor, in congratluating his novice friend on his successful first attempt at introduction, adds:—"Your method made sure of the old queen being removed, and you retained young bees to receive the new queen, leaving all unsealed brood with the old queen. The more young bees that a hive has, to receive a queen, the greater the chances of success."

Protecting Hives in Winter.—Mr. A. C. Miller has for long been advocating black building-paper for a winter protection of hives; and in the *Australian Bee Journal* he says:—"The theory I had was that while being wind and water proof, it would, by absorbing the sun's rays, help to keep the hives warm and dry, thereby enabling the bees to feed and clean house, and by its poor conductivity by contact, and by its not fitting tight to the hive, would be so slow in permitting the escape of the heat that it would give the bees ample time to recluster. The results have been all and

more than I expected." Mr. Allen Latham is also a strong believer in "black waterproof paper" covering on hives. I may say most of my hives are provided with a cover or hood of black felt during the winter months. It keeps them warm and dry beyond a doubt, and I think there is something in the non-conductivity theory.

Fumigating Foul-broody Combs.—"Has fumigation of brood-combs exposed in a tight room ever been tried on foul-broody combs with formaldehyde?" was a question asked at last Chicago Convention, and Mr. France's reply was, "Yes, but, as a rule, not successfully." While Mr. McEvoy's reply was even more emphatic. He says:—"It will never be a success in any apiary." The process was tried by several bee-keepers in this country at one time, and some believed in it. In Ireland cures are credited as a result of the operation. While I believe the fumigation is very beneficial there would always remain in my mind a reserve of doubt as to a cure.

BEE-KEEPING IN NEW ZEALAND.

THE EDITORS, *British Bee Journal*,

DEAR SIRS,—It may be of interest to you to learn that the Government of New Zealand have introduced a Bill into the New Zealand Parliament this session, now sitting, entitled "The Apiaries Act, 1906," under the provisions of which the interpretation of "disease" shall mean *Bacillus alvei* (foul brood), *Galleria mellonella* and *Achroea grizzella* (bee moths) "and any other diseases or pests from time to time declared by the Governor in Council."

The Bill goes on to state that every bee-keeper in whose apiary any disease appears shall, within seven days after first discovering or becoming aware of its presence, send written notice thereof to the Secretary of Apiculture.

Inspectors are to be appointed who shall have power to enter any premises or buildings for the purpose of examining any bees, hives, or appliances, and shall direct the treatment to be followed, should the same be found affected with disease. And, if in his opinion, the disease is too fully developed to be cured, he may direct the bee-keeper to destroy by fire the bees, hives, and appliances, or in default of compliance with such instructions the inspector may at once destroy, or caused to be destroyed by fire, at the expense of the bee-keeper, such bees and appliances as he may deem necessary.

No bee-keeper shall be allowed to keep upon any land occupied by him any diseased bees bee-combs, or infected hives or appliances, without taking immediate steps to cure the disease, nor shall he sell, barter, or give away, any colonies of bees or queens reared in any such infected apiary.

Any person who obstructs an inspector in the exercise of his duties under the Act or refuses to permit the destruction of infected bees and appliances, or fails to comply with instructions of the inspector, or commits any breach of this Act, shall be liable to a fine not exceeding £20.

No compensation will be given for anything lawfully done under the Act.

I shall be glad to forward you a copy of the Act, should the same be passed this session.—I remain, yours faithfully,

C. WRAY PALLISER.

November 19.

VILLAGE BEE CLUBS.

AN INTERESTING HOME INDUSTRY.

Rather more than two years ago Mr. W. H. Harris of The Shrubbery, Hayes End, who has long been interested in apiculture, determined to try to form a bee-keepers' club, so as to bring into touch those in his neighbourhood who kept bees. An inaugural meeting was held on October 29, 1904, and a fair number of members were enrolled. The objects in view were as follows:—(1) To give information relating to bees and bee-keeping; (2) to afford mutual help and advice in apicultural difficulties; (3) to purchase appliances at wholesale prices, and retail them at cost price to members; (4) to assist one another in the disposal of bee-produce. Ever since the formation of the Hayes and Hillingdon Bee Club, meetings of the members have been held at intervals of two months at The Shrubbery, and on several occasions after business matters have been dealt with, the president has given short lectures on various subjects of scientific and practical interest to bee-keepers. In addition, arrangements have been made and carried out for a visit, each spring and autumn, from the expert of the Middlesex Bee-keepers' Association, to the apiary of each member of the club. By these means much useful information and assistance have been given, with the result that excellent takes of honey have been made by most of those who belong to the club. We feel sure the following figures will be interesting, if not surprising to many of our readers. From five hives, Mr. W. H. Harris has had this year 278 lb. of honey; Mr. Dudley Lewis, five stocks, 182 lb.; Mr. E. H. Beckett, three stocks, 150 lb.; Mr. Whatman, three stocks, 60 lb.; Mr. W. Palmer, two stocks, 120 lb.; Miss S. Parrott, two stocks, 80 lb.; Mr. Stevens, two stocks, 106 lb.; Mr. Judge, two stocks, 62 lb.; Police-sergeant F. Rogers (Park Road), one stock, 56 lb.; Mr. Palmer, jun., one stock, 50 lb. These facts prove that

bee-keeping, if conducted with adequate knowledge and skill, can be made a paying pursuit. But it possesses other recommendations. Nearly all our garden fruits are dependent on the visits of insects for perfect development, and bees are the chief means by which the necessary conveyance and application of pollen to the blossoms is effected. Hence it is a well-known fact that fruit gardens are most prolific in the neighbourhood of numerous hives.

(Communicated.)

ARE BEES WILD ANIMALS?

Referring to press cutting, under the above heading on page 407 last week a correspondent sends the following from the *Evening Express* (Liverpool):—"In your report of a Sheffield County Court case under the above heading, the learned judge decided after a lengthy discussion that bees were distrainable because they were chattels, as they were liable to larceny, though the solicitor for the applicant raised the novel point that they were not personal property, because it is not mentioned under the things which a bailiff is authorised to seize, and consequently under the category of animals.

"I am sure it would be interesting to your many readers that even such a minor but extraordinary point did not escape the notice of the ancient Rabbis who complied the Talmud. In a discussion in one of the Mishnas, jurisprudence section (Baba Bathra, Treatise 5, Chapter 3), they came to the conclusion that bees can be bought and regarded as chattels. They even discussed which bees the buyer should receive if he agrees to purchase a year's output of bees from one hive. They decided that he is to have the first three swarms (as they are the best), and then alternate ones, for the rest of the year.

"It is still more remarkable when one remembers that this law was compiled over fifteen hundred years ago.—M. KENT, 10, Belgrave Street, Liverpool, October 9, 1906."

Queries and Replies.

[3437.] *Tin versus Wood Girders for Section Racks.*—As I shall be requiring some more section racks for next season, I have been wondering if the ordinary rack with laths at bottom is the best? It seems to me that if a bottom arrangement could be made with tin girders, thus for the sections to rest upon instead of the wooden laths, there would be less trouble with propolised sections. I have noticed two or three times this year that with laths in removing the top rack from a hive it has been so glued to the one below that the tops of sections have broken away and come right off by sticking on the bottom of the top super. I hope you can understand my rough description, but the grievance is a real one. There is no doubt the arrangement I refer to has been tried before by someone, and if so I would like to know the result? With tin girders the bottom would be loose and be lifted out along with the sections (upwards). With regard to the use of excluder zinc under sections, I never use it when working for section honey, and this year I only had one section with brood out of 600. This is the first for 5 years. Will the "Smith" bee-escape allow for exit of drones? and is it as easy to fix as the "Porter" in a board? I find the bees block the "Porter" at times.—J. G., Kent.

REPLY.—If racks are properly made with wooden girders, it has been found that there is less risk of propolising than when tin girders are used. In districts where propolis is very abundant it is advantageous to use a little vaseline between section rack, and this minimises the trouble named.

[3438.] *Bees Deserting Hive in November.*—Would you kindly tell me in your valuable journal what is the cause of my bees forsaking their home and stores? I bought the hive and bees from a neighbouring beeman this Michaelmas, and he had evidently neglected them entirely, for the hive and hive-roof was completely full of bees and honey from top to bottom. I drove the bees from the roof and returned them to the body of the hive, after which operation took three stones weight of honey from it. To-day I peeped under the quilts to see if all was right, and to my surprise found that the bees had gone, save about a handful, which are queenless. There are 18 frames almost full of honey, and so I wondered if I might shake the bees and queen from another stock (which is very short of stores), into the deserted hive? I might say, the bees last mentioned are on very large frames, while those in the deserted hive are of standard size and contain over 30 lbs. of honey.—"Tulip," Walsingham, Norfolk.

REPLY.—It is more than probable that during the operation of driving and transferring some mischance has befallen the queen of the stock to which your query refers, and that the bulk of the bees have joined forces with one of your other stocks on finding themselves queenless. This being so, the best course is to await a warm day, when bees are flying freely, and then remove all the standard frames into the vacant space left. Then insert as many frames of food as the bees can cover and close all down for winter.

Notices to Correspondents & Inquirers.

F. D. O. (Llangmllo). The Edinburgh Industrial Exhibition.—We usually receive the list of awards relating to shows advertised in our pages, either from the show authorities or through press cuttings. But no re-

port has so far come to hand, connected with the above exhibition.

F. J. R. B. (Amersham). — Varieties of Heather.—1. The sprig of heather sent is the common "ling," and is the best bee-forage plant among heather. 2. We are not familiar with the heaths that abound in Ireland, so cannot say which variety is common there, but as we rarely hear of Irish heather honey, the inference is that the heather of Co. Galway is the Erica cinerea or bell heather. 3. Erica tetralix is of no value as bee-forage.

D. W. I. (Harrogate).—Hampshire is one of best counties for bee-forage and the quality of its produce.

G. C. (Sheffield).—Drone Brood and Drone Cells.—You are mistaken in your idea on the above. Drone brood may be, and is, reared in worker cells if deposited therein by an unmated queen, and, moreover, fully developed drones will result. But with a fertile queen, unless aged and worn out, the eggs for drone and worker production are found only in their respective cells.

H. S. (Teddington).—Your candy is not sufficiently boiled, and will soon become quite hard. It also needs more stirring to ensure a smooth, "buttery" grain.

R. L. Sharp (Formby).—Honey Candy.—Granulated honey may be used as bee-candy if made stiff enough by kneading into it sufficient castor sugar for the purpose.

Honey Samples.

F. G. (Bassingbourne).—Your sample is of excellent quality, and the competition must have been very keen for it to get no higher award than v.h.c.

J. K. (Cheshire).—The sample may or may not have been gathered (as stated) in Worcestershire, and it may have come from a keg of imported honey. It is practically impossible for anyone to say; but it is bee produce all the some.

T. Hicking (Derbyshire).—No. 1 is coarse in quality, and is from mixed sources. The flavour also is poor. No. 2 and 3 are fair in quality, but not up to show standard.

H. S. (Teddington).—No. 2 is good on all points but flavour, which is spoilt by some source of honey which we cannot define. No. 1 is inferior to the above on all points, and would not sell well for table use. No. 3 is still worse, and has the "taint" of the smoker badly.

W. Jones (Carnarvon).—No. 1 is a very good sample of heather and clover blend—about two-thirds heather, we should say. No. 2 is almost entirely from clover. Both samples being granulated, we cannot well say how they would stand as liquid honey on the show-bench, but the flavour is good. We will be very pleased to get your note on bee-keeping in your part of Wales.

J. H. (Hebden Bridge).—No. 1 is a nice blend honey: but with regard to No. 2 (gathered in 1896), it is very poor in quality, and would not be saleable for table use.

Ormskirk (Lancashire).—There is a considerable portion of heather honey in your sample, which makes a nice heather-blend for table use.

Suspected Comb.

G. K. J. (Glamorgan).—All pieces of comb sent, save one, contain pollen only. But the last named piece has a few sealed cells in which were found dead brood exactly analogous to the "black brood," which has been frequently referred to in our pages of late.

Special Prepaid Advertisements.

Twelve words and under Sixpence: for every additional Three words or under, One Penny.

WELLS HIVE complete, stock on 8 frames, and appliance, 35s. lot.—PICKERSGILL, Bishop Monkton, Leeds.

HIGH-CLASS DRAGOONS (pedigrees guaranteed) from 5s. each; also Exhibition Flying Homers from 3s. each. Exchange Extracted Honey.—TALBOT, Postmaster, Romford. U 49

EXTRACTED HONEY, good colour, in 14 lb. tins. Sample 3d. Also few Sections.—W. JOHNSON, Welbourn, Royston. U 47

PURE HEATHER HONEY, 7s. per stone; two empty "W.B.C." hives, nearly new, 12s. 6d. each. Inspection invited.—HARRISON BEE FARM, Middleton, Pickering, Yorks. U 46

"RELIABLE" BEE FARM'S 1st quality sections for sale, 9s. dozen glazed, 8s. plain, well packed, 1st prize and silver medal Grocers' Exhibition, 2nd prize Dairy, for displays; one 1st and three seconds for sections and extracted at Southend. We can show the highest testimonials as to quality and packing.—Address S. R. SOAL, Rochford, Essex. U 45

WHAT Offers, first 18 volumes "Bee Journal," Cotton, Isaac, Wildman, Bonner, and other rare books?—W. GRIFFIN, Stoke Rivers, North Devon. U 44

POULTRY.—Pure Minorca, also Leghorn Cockerels (black), 5s., 4s., and 3s. 6d. each; or exchange honey.—ALSFORD, Bee Expert, Haydon, Sherborne. U 33

CLOVER HONEY (guaranteed pure), 1lb. screw-cap bottles, 77s. gross. 2ls., ½ gross; ½ lb., ditto, 45s. gross, 13s. ¼ gross; honey in tins, 14lb. to 56lb. supplied; safe delivery guaranteed. Special screw-cap honey jars, cleaned, each wrapped in paper, 17s. 6d. gross.—Further particulars, TURNER BROS., Sandpit Farm, Croydon. U 43

LIMNANTHIS DOUGLASSI, splendid bee flowers (selling well), still a few left, 120 1s., free.—W. HAZELWOOD, Ilminster. U 42

FOR Sale, several dozen good SECTIONS from various sources. — GOODSELL, Sissinghurst, Cranbrook. U 41

40LB. PURE BEES WAX in one lump, light in colour, all from sainfoin and clover cappings, at 1s. 9d. lb. Sample 2d. Cash or deposit.—BROWN, Flora Apiary, Somersham, Hunts. U 39

NOW is the time to plant (Salix Viminalis) gold osiers and (Salex Treandra) Black Hollander. The earliest pollen for your bees will grow anywhere, 25 cuttings 1s. 6d., with instructions how to plant.—R. BROWN, Bee Expert, Somersham, Hunts. U 40

CHAPMAN HONEY PLANTS; strong plants, to blossom 1907, 2s. 6d. per dozen. Seed 6d. per packet.—JOHN P. PHILLIPS, Spetchley, Worcester. U 38

Editorial, Notices, &c.

PRONUNCIATION OF "BEE-WORDS."

Referring to the subject of "pronunciation" dealt with in our last two issues, we have received the following letter in reply to that of Colonel Walker (6507, page 463):—

DEAR MESSRS. EDITORS,—I regret that the obvious mistake pointed out by Colonel Walker in the word "Alvei" escaped my notice. The "proof," as you are aware, reached me only on the morning of the day you were going to press. I, it now seems, too hastily ran my eye over the words, and sent you a telegram with regard to one instead of two. I confess, too, I ought to have said "Chiten" = "Kiteen." I thank the Colonel for calling my attention to his second point. By no means wishing to screen myself from friendly criticism, I sign myself, yours truly, W. H. HARRIS, Hayes End, Middlesex, November 22.

Correspondence.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

Communications relating to the literary department, reports of Associations, Shows, Meetings, Echoes, Queries, Books for Review, &c., must be addressed only to "THE EDITORS of the 'British Bee Journal,' 8, *Henrietta-street, Covent Garden London, W.C.*" *All business communications relating to advertisements, &c., must be addressed to* "THE MANAGER, 'British Bee Journal,' *Office*, 8, *Henrietta-Street, Corent Garden, London, W.C.*"

*** *In order to facilitate reference, Correspondents, when speaking of any letter or query previously inserted, will oblige by mentioning the number of the letter as well as the page on which it appears.*

AMONG THE BEES.

PRESERVING SURPLUS HONEY.

[6517.] My first advice would be, sell it all before the end of the year, and then it will be easy "preserving" it in the shape of pounds, shillings, and pence, or their equivalent. All comb-honey should be disposed of before Christmas, if possible. I have seen some racks of sections taken from the hives, only the other day, all in first-class order. Nowhere can honey be taken better care of than in the hives, but clearing them in winter is not advisable for many reasons. A cold, damp store-room is the very worst place in which to keep honey in comb. After even a few weeks there it will be found that sections have deteriorated considerably, and very soon they will be found "weeping," the honey turning thin and watery, followed by a rank and sour taste, developing into fermentation in course of time. Honey readily attracts moisture from the atmosphere, and absorbs it through the porous capping. The beautiful white, clean surface gets wet and small beads of moisture ooze through the sealing, as if it were shedding tears. Hence the description generally given holds true—the sections are "weeping." Avoid this by keeping the honey in a warm, dry place—a press or cupboard in the kitchen, as near to the fire as may be, is the very best position. Where table-salt will keep without turning moist will suit for honey-storing. To preserve sections until next summer, wrap each in a sheet of waxed paper and parcel these in brown paper, placing them in a biscuit tin, which can then be hermetically sealed. Thus kept they will be fresh in June.

Low-priced Honey.—I will answer Mr. Wright's question (6478, page 435) by asking him another. If I sold (as I did) all my clover honey wholesale at 10d., sending it to the centre of England, why should he, or Mr. Harrison, or any man, sell genuine heather honey at the absurdly low price of 6d. or 7d.? A little business tact is often a more urgent desideratum than a profound knowledge of apiculture in answering the oft-repeated query, "Do bees pay?" I sympathise with Mr. Wright in his difficulty to get a higher price than 6s. to 9s. for his swarms. I wish I had known it this last summer. If he takes my advice and advertises in the B.B.J. I know he will have no difficulty in obtaining at least 10s. to 12s. 6d. for good swarms. Distance does not count appreciably in forwarding swarms, as they come here from the South of England for about 1s. By the way, Mr. W. speaks of my "wrathful comment." May I say no thought of such a feeling entered my mind. I wrote more in sorrow than in anger.

"*Cappings of Comb.*"—Mr. "L. S. C." states my case admirably when he says:—"In a general way the brood-nest is *not* the place for shallow-combs." That is exactly my opinion, and further words of mine would only cloud the clear water. Hiving driven bees from above frames is reprehensible for many reasons—throwing them in a narrow side-space is *almost* equally so. Will the qualifying word modify the statement to the extent so that it will pass muster with our genial "capper"? For the novice this limited area is so small that he feels "cabin'd, cribb'd, confin'd," and the result is that in nine cases out of ten one-fourth of the bees go into the side-space; another moiety gets hurled promiscuously over the tops of frames to wander about like lost spirits; a very large fraction cling tenaciously to the box;

while a considerable contingent takes wing, generally flying no farther afield than the unlucky operator on whom they bestow of their loving favours. If timorous he quits, and then comes chaos! I have known it all happen.

Large Takes of Honey.—The query by "S. M." (6479, page 436) reminds me of another printed so long ago as September 6 last (6415, page 355) wherein the writer commiserates me on my small returns, and both bring to my recollection the fact that I have not given my usual returns for the past season. I may, therefore, now say:—Our spring was a wretched one, and winter clung to us all through May. Bees lagged woefully behind almost all through June, but pulled up in early July, the latter part of the month being decidedly good. The heather proved the best we have had for many years, and I finished the season with the fair average of over 60lb. per hive. My best dozen supered hives gave me the following surplus in sections: 114, 109, 102, 98, 89, 87, 84, 79, 77, 61, 52, and 48 finished 1-lb. sections. To "S. M.'s" questions in regard to the two swarms yielding 109 and 89 lb., I would reply as follows:—(1) Both would weigh nearly 5 lb., but were bought as 4-lb. swarms. (2) They were hived on fully drawn-out comb, as I mentioned in a former issue. (3) They got nine frames, and no more were given right through the season. (4) The sections were filled with full sheets, or rather the sheet of foundation was cut in four, thus nearly filling the section. (5) No drawn-out combs were used in the sections, with the exception of *one* "bait" section in the first rack given. (6) All racks were given above the others, rather before there was any clamant need, but these were placed below when taken possession of by the bees, and the nearly-full ones raised above to seal. At the same operation an empty rack was placed above all the others to act as a cooler. (7) No special attention was given these hives after the bees were placed in them, and no interference with the brood-nest took place after the first rack was placed on.

I never remember consigning my bees to winter quarters better provided with stores. Indeed, most of them have their combs a solid block of fine heather honey. Almost all gathered after the advent of September went into brood-frames. One bee-keeper I know finding the same in his case—joined on the bees of two hives, placing them on the combs of brood and such frames as were only partly filled. He considers they have ample stores, and he has netted a nice quantity of pressed honey to add to his total surplus.

Another bee-man makes a regular practice of shifting three of the oldest, most irregularly built, or suspicious, combs each year to the rear of his "Combination" hive. Their places are taken by new frames with full sheets of foundation. In this way he steadily renews his combs every third year. Pressing or extracting these three rejected combs he considers the honey obtained more than compensates him for his trouble; while he contends that the supers of sections suffer little, if at all, from what is placed in these frames.

I was pleased to see Mr. Moir's report in a recent B.B.J. He had an excellent season. When the Banff Bee-keepers' Association visited his "Model" apiary in the closing days of June he was nearly a month ahead of me. I have previously repeatedly stated that many northern bee-keepers do better than I can do. Witness Mr. Moir and Mr. Ellis, and many more if they would only tell.—D. M. M.

MISREADINGS.

THE QUESTION OF WRITING KING'S ENGLISH.

[6518.] How very strange it is, Sirs, that one's communications to the "B.B.J." are so often misread, or misunderstood. One might not wonder at this in the case of your unlearned readers, but when a "Second-Class Expert" shows his inability to grasp the meaning of words, not to mention his weakness in writing "King's English," some surprise is, I think, only natural. Your correspondent, J. Price, says (6512, p. 465), "We much-abused experts are told by another—" but he forgets to say what they are "told." He says I "complain" that experts "ought to popularise honey as an article of food." Now, Mr. Editor, how could anyone "complain" about what "ought" to be done? If he had written "suggest" instead of "complain," he would have expressed my real meaning. My remarks on the subject of "low prices" were called forth by the complaints of other correspondents, and were not prompted by my own experience. Personally, I am quite able to look after my bees, and also to market my honey at a good price, without expert help (second, or any other class). If the price offered me is below my figure I decline it with thanks. And as for popularising the use of honey, I can assure Mr. Price that in ten years I have increased the use ten-fold locally by the methods I have adopted. I never have to advertise my stock; my customers come again and again—no thanks to any expert. This class often, I fear, has an axe of its own to grind.

When best honey is advertised in screw-cap jars at 7s. per dozen, or less, it looks as if some bee-keepers found it difficult to market their produce, but then, perhaps, they are not "business-like," your correspondent might suggest. Facts, Messrs. Editors, are awkward things,

especially for some theorisers, and facts point to the supply of English honey exceeding the demand at the present time. The remedy, it seems to me, lies in the direction of using some of the "expert" energy to enlighten the public upon the uses and value of honey, rather than to use it in further augmenting an already too abundant supply.—W. H., Brilley, Herefordshire, November 26.

MINIATURE SECTIONS.

[6519.] I am pleased to intimate to the bee-keepers who have written me for these small sections, that the minimum quantity of 12 gross has easily been covered—at the present moment the amount stands at over 30 gross.

Shall I still keep open for "Record" readers, or close now with the quantity on hand? Of course, as mentioned before, once this quantity is made no more can be got under the same favourable conditions, so I shall be glad to know whether "Record" readers are to be given the chance, in the coming December number, or not; also if there are any other readers wishing a gross to send p.c. as soon as possible. [Keep "open," please.—EDS.]

I think it will be better to have only a plain paper band round the sections for this first lot. Besides keeping down expense this will probably suit everybody better. Bee-keepers wishing printed matter on these sections could use a rubber stamp made to any desired pattern, and, as stated by Mr. W. F. Reid in last week's JOURNAL, if name and address of bee-keeper was included the finished section would be a very nice advertisement.

When everything is fixed up and the sections ready for post I shall postcard all those who have applied, giving cost, etc. This will be sooner or later according to the answer re "Record" readers.

In reply to Mr. Woodley:—These sections weigh 1 oz. each, probably slightly over the ounce, and so to retail them at 9d. a dozen, or in other words at 1s. per lb. for honey, should not spell financial ruin to those bee-keepers who try them. It is absurd to suggest selling at 6d. to 8d. per lb., and thus give 100 per cent. to the restaurant. I understand 10d. per dozen is the price paid by tea rooms for their small pots of jam, so that 9d. a dozen is not an out-of-the-way price for these miniature sections. Again, with regard to the small jars of extracted honey retailing at 1d. in restaurants, etc. It must be understood that 1d. is the price of honey only, the jars being used again and again. I believe that Mr. Geo. Rose, Liverpool, has supplied these small jars, both empty and full of honey, to restaurants and bee-keepers for some time back. This surely shows that honey can be marketed in this fashion to advantage, and that Mr. Woodley is on the early side with his cold water.—R. N. ROBERTSON, Spearshill, Tayport, N.B.

MR. S. SIMMINS AND FOUL BROOD.

[6520.] My attention has lately been called to the last par of Mr. Macdonald's "Extracts and Comments" on page 388 of September 27 last. As misunderstandings are always liable to occur, I should like to offer a few words in reference thereto. In the first place, it would be well to point out that as far as I am aware, I am in no way responsible for the statements of our American friends in that they attempt to draw a distinction between American and European foul brood. In many articles published in "Gleanings," I have insisted that the disease I have known in this country has not been the so-called, nor any *mild* type of the pest. The editor of that journal justly considering my statements to be statements of fact, suggested that our bees must be more immune than those cultivated in America. Here again, I assured him that such was not the case as regards the bees generally used in the States; while I regard our native bees as less able to contend with the complaint than either Italians or Carniolans.

I have yet to learn that the disease known as Bacillus alvei is any other than a malignant disease, and I see no reason why it should in any way be different in America to that which we experience in this country. Neither do I know how our American friends have been able to make the distinction as quoted by Mr. Macdonald.

In recent years my experience has been mostly confined to assisting numerous correspondents in disposing of the malady, and I have helped them cure some of the worst known cases. It is some twenty years since I first studied the now well-known Bacillus alvei under the microscope with the late F. R. Cheshire (who discovered and named the same); and that was ten years after I had my great battle with the plague—a bitter lesson which has since stood me in good stead, enabling me for many years past to keep my own apiary free from the plague. Mr. Macdonald considers that the genuine Bacillus alvei in its most advanced form cannot be cured by my methods, and even goes so far as to say "I know his professed cure cannot exterminate the virulent form of the disease." I have, however, stated as a fact that I can so cure, without medication, at certain seasons; or in connection with medicinal application at other less active periods; and without destroying any portion of the combs. After thirty years' experience of the disease, possibly I am as much entitled

to say "I know" as are my friends who criticise my statements, and whose adverse opinions I can well excuse, for does not he laugh who wins?

I should, however, like to state that the particular process of mine has been presented solely as a basis of cure; and in no instance have I advised the inexperienced to attempt the cure without at the same time using the specific precautions which have proved successful in saving many apiaries. I must again refer to my friend's declaration "I know," as I feel that the expression was used without thought. Had Mr. Macdonald in speaking for himself said "I can't cure a bad case," no possible exception could have been taken to such a declaration of fact, but the term used by him implies that neither can any other bee-keeper cure a rotten case of foul brood. I am sure my friend will see the inadvisability of attempting to speak for others of independent mind and action, who from practical observation and experience are able to say "I know" in an opposite sense to that which he has used. While I can say I am able to cure the worst possible cases of the genuine foul brood either without or with a medicinal agent, and without destroying the combs, I am not prepared to say every one can or should do the same. Many have thus cured, but while some others have not the knack of correct application, others again may be in a neighbourhood where the pest is neglected all around them, while yet again a few may own bees that are incapable of any regenerative effort. Let us not say "I can't," but emphatically "I will," and where the "will" is persistent, success usually follows sooner or later. If one strain of bees will not respond to treatment, it is quite possible a more vigorous variety may do so, as I have many times proved. — SAML. SIMMINS, November 15.

[We rather think that Mr. Simmins has overlooked the fact that "Gleanings" or its editor is not mentioned at all on page 388. The editor referred to is Mr. W. Z. Hutchinson, of the "Bee-Keepers' Review." Nor can we accept Mr. Simmins' statement that it was "the late F. R. Cheshire who discovered and named" the disease in question. Foul brood, or "Bee-pest," was known centuries ago by the ancients as a bee disease. In was described in 1769, by Schirach, who first gave to it the name of foul brood. Coming to later times its true nature was discovered thirty-two years ago by a German scientist (Dr. Cohn), who was the first to declare that foul brood was caused by a bacillus (called by German writers Bacillus alveolaris) to which Mr. Cheshire nine years later gave the name Bacillus alvei. We make the above facts known in order that readers may be enabled to form their own conclusions on the subject.—EDS.]

BEE NOTES FROM HAMPSHIRE.

"The roseate hues of early dawn,
How soon they fade away."

[6521.] Those are my sentiments, Messrs. Editors and bee friends. On June 25 B.B.J. (page 255) I reported "Bees doing well," and so they have, for themselves, but the bee-keeper has to put up with a short crop this year, with the exception, perhaps, of a few isolated cases. As soon as the sainfoin was over, so also was the grand honey-flow looked for, although there was an abundance of clover in the pastures. I understand that the clover needs a ground temperature of about 70 deg. Fahr. in order to secrete nectar plentifully. That being so, it explains our short crop, for the nights in June and July were very much below that given, though considerably higher during the day. However, we are thankful for what surplus we have; with an abundance of stores in brood-nests, plenty of bees in each hive, and young queens, we rest on our oars, reviewing the past and arranging our plans for the future.

Hive Roofs.—I have had some roofs "on trial" for twelve months now. I described them some time ago in your pages, and they are fixed up as recommended in the "Guide Book." Paint your roof, stretch on and tack some calico, "paint" it with boiled oil, let it dry, then give two coats of paint, and the job is done. Not a drop of water has come through, even in the trying weather we have been having of late. All my roofs will be treated thus in future

During the past season, several cases of bees re-queening themselves have come under my notice, and with no apparent cause for so doing, as each stock had a young queen given to it last year. They were not strong enough to swarm, neither did they, but the queens hatched out all right. I suppose they were not satisfied with their lot, and tried to improve it. I wonder if other bee-keepers have noticed the same thing?

During the past two or three seasons a friend of mine has had one of his rose trees visited by a certain kind of wild bee (the leaf-cutter bee), which cuts a circular piece out of the leaves of the tree and carries it off for its own purpose. The insect can be plainly heard at its work, and, strangely enough, confines its attentions to one tree only, although several more trees are quite close. I forget the name of the rose so attended, but ask, why should this be so, and have gardener-bee-keepers noticed the same thing?

Whilst looking back with a fair amount

of satisfaction on my own "doings" during the past season, I must tender my sincere sympathy to our brethren over the Solent, for during the past twelve months something like a scourge has visited the apiaries. I have friends over there, bee-keepers, in different parts of the island, and from them all comes the cry, "My bees have gone under." One wrote asking "What can be the matter with my bees, strong in the early spring, but almost died out now (summer), and the ground literally strewed with their carcases?" Another, "All my bees have died from this scourge (? paralysis)." He owned about seventeen stocks. Another, "I have lost something like thirty-four stocks. Another, a clergyman, and an enthusiastic bee-keeper, is in despair about his pets. They all ask, "What can I do?" It makes me feel thankful that I left the "Island" five years ago, and brought bees with me.

I am sure the sympathies of all bee-keepers will go out to our isolated brethren in their real distress. The last report I had, only a short time back, showed the scourge still sweeping the apiaries out, although at one time, during the time that the white clover was in bloom, it seemed to stay its hand. Importing fresh "blood" does not eradicate the disease; in fact, they all go the same way. We can only hope for brighter times near at hand for our distressed brethren.

I fear I am overstepping the mark, in the length of my notes, so will send rest later on.—HANTS BEE, November 24.

USEFUL POINTS IN BEE-KEEPING.

HIVING DRIVEN BEES.

[6522.] Whenever I reach home after dark with driven lots of bees for hiving, I simply shake them together in a heap—as many lots as are necessary, but usually two—on the top of the frames, covering over at once with a cloth or clean dust-sheet. This latter must be done very quickly, or the bees will "boil over" the sides. The roof is then put on, and in about half an hour the bees will have gone down. The sheet may then be removed, and the quilts put on. This is quite a good method, because the bees get settled down before morning, and are prepared for the robbers, which generally come to inspect a new stock. I see there is some divergence of opinion on the question of the "Yield of honey from skeps." For myself, I should say a skep weighing, say, 30 lb. gross will not yield more than 16 lb. or 17 lb. of run honey, because, besides the weight of skep and live bees, there is often a good deal of pollen and brood in the combs. "D. M. M.'s" locality must be an exceptionally favourable one for bees, from his remarks in B.B.J. of October 18 last (page 414). I once bought a swarm for 10s. 6d. from a cottager in June 4. It was hived on ready-built combs, and although a good season, the swarm only produced twenty sections, and stored 20 lb. for winter.

I once fed up my bees with what my grocer said was "pure cane sugar." The bees, however, suffered badly from dysentery, though the feeding was completed before September 15, and on further inquiry, the dealer said he "rather feared that the sugar was from beet after all"! Needless to say, I take care to use guaranteed pure cane. When bee-keepers give their "yields" of honey for publication, I often wonder what "stores" they allow for the bees before estimating their surplus? I remember a bee-keeper who had—on paper—20 lb. per hive better yield than everyone else had in his locality. However, upon inquiry it turned out that he had only left from 6 lb. to 10 lb. of stores in each hive, whereas his neighbours had left their bees 30 lb.

The average of 129 lb. per hive (page 465) on fourteen stocks is truly a marvellous return, and one would suppose that the district is extra good for honey-yielding plants.—EXPERT, Cheltenham.

BEE-FARMING AS AN OCCUPATION.

[6523.] Having recently come in contact with your excellent paper, the BRITISH BEE JOURNAL, I venture to quote my experience of last summer on my first acquaintance with that greatest of all wonders to the inexperienced—a swarm of bees! Not far from my address, in the month of August, the neighbours were in a dreadful state of mind consequent on a swarm of bees having settled on a tree in their midst. I was asked, in great alarm, to go and "take away those dreadful bees!" I removed them in a table-cloth spread on the lower branches of the tree, by giving the branch a good shake the bees dropped into it. Then, having captured the swarm and allayed the fear of my friends, I was obliged to make an impromptu hive, which, when finished, looked like anything short of a bee-hive. But those bees! They swarmed again, and had to be re-captured. At last, however, they set about work in earnest, and I became the proud owner of a fine swarm, and now that their labours for this year are over, I want to provide them with a home worthy their labours. Could you, through the B.B.J., instruct me how to set about it? I have plenty of good new wood and a fair knowledge of joinery.

Once on my feet, I hope to develop into an enthusiastic bee-keeper. Trusting this will meet with encouragement at your hands,—T. L., Sheffield.

[You cannot do better than provide yourself with the "Bee-keeper's Note Book," price 1s. 1d., from this office. It gives full details for hive-making.—EDS.]

HONEY IN NAME ONLY.

[6524.] Your correspondent "W. H. W." (6514, *p.* 466) should endeavour to prove his previous statement alleging dishonesty on the part of exhibitors, or withdraw it. In his letter of last week, as I understand it, he now accuses exhibitors of altering the composition of the honey staged, which, as he says, is composed of sugar of different kinds, etc., "and 25 per cent. of water." Does "W. H. W." make it a ground of complaint that some of this mixture evaporates? If so, surely this is no crime on the part of an exhibitor or a secret. The B.B.J. and all good bee-books tell us that honey must be kept in a warm place, as near the temperature of a hive as possible, and this seems the sole ground upon which your correspondent makes his sweeping charges.—J. CARVER, Wellington, Salop.

[The above correspondence must now be closed.—EDS.]

POLLEN CARRYING IN NOVEMBER.

[6525.] Your correspondent, "Student, York" (whose query appears on page 459), should come to Cefn y Coed, Menai Bridge, Anglesey, where I am now staying for a short time. On some bright, sunny day in November, and with the snow-clad peaks of the Snowdon range smiling at him across the water, he may sit for an hour without hat or coat, watching the bees rolling into the hives great loads of the pollen he wondered at a month back, and then come with me to an upper room window and see such a stream of bees coming and going over one corner of the garden wall as shall send us trespassing on our neighbour's grounds to find the attraction, and here, close by a very solid slate sundial, in a warm, secluded corner is ivybush, 8 ft. high, a mass of flower, and as we sit on said sundial, and perhaps are lulled to sleep by the genial heat of a winter's sun and the gleeful murmur of the happy workers, a poor, jaded city man may be excused if he fancies June is here, and, startled by a steamer's whistle, he exclaims, "There's La Marguerite!" But 'tis only the weekly goods steamer "Christiania" from Liverpool. "La Marguerite," "St. Judno," and the others of the fair fleet of North Wales S.S.Co., are docked till summer comes indeed, and the sun quickly goes down in a great display of colour, and the days are short, and a cup of tea by a cheery fire is very welcome, whatever.

"Caraf ei morfa, a'i mynyddedd,
A'i gwilain gwynion, a'i gwymp wreigèdd."

"I love her golden shores, her mountains bare,
Her snow-white sea-gulls, and her maidens fair."

—GEORGE ROSE, Liverpool.

MY START IN BEE-KEEPING.

[6526.] I am sending the accompanying small jar of honey, so that you may give me your opinion of its quality in the B.B.J. It was in the latter part of May, this year, that I had given me two stocks of bees in frame-hives, which were moved to our garden. I had no previous practical knowledge of bee-keeping, but had read sufficient to give me a strong desire to possess some bees. Hardly knowing when supers should be given, I gave a rack of sections (fitted with foundation) to each hive very soon after the bees were settled down to work. Nearly two months later, however, I was greatly surprised to find that the bees had only filled and sealed completely fourteen of the sections, whilst some others were partly filled, and a few untouched. I then spoke to a very successful bee-keeper, who has since then given me much help and advice. One fine morning he looked through my two stocks, and declared that both had "foul brood" rather badly, and advised stringent "doctoring" as a cure. I shall not soon forget my first year's bee-keeping. Foul brood has, directly and indirectly given me a good deal of experience, which might otherwise have taken years to find out.

The same evening we turned the whole of the bees out of their hives into two skeps, and starved them in the dark for forty-eight hours, meantime charring thoroughly the infected hives and burning all quilts, etc. Two days later I returned the bees to their hives, giving them six drawn-out frames of comb which my friend presented me with, and fed them rapidly with medicated syrup. I was advised to try and get some driven bees, and I soon obtained a promise of six lots from a skeppist bee-man nine miles away, for the driving. My first experience of bee-driving over, these six lots of bees were placed in our cellar, and as the three succeeding days were very wet and cold, they had to stop there, being fed in the meantime. The fourth day three skeps were placed round the two hives, so that the strangers might get used to their fresh surroundings, and on the fifth, with the help of my friend and a good deal of flour and commotion, we happily strengthened each of

our weakened stocks by the additional numbers of three driven lots. As far as we could see no fighting took place, and next morning every bee was busily at work for its own home. As we had not picked out the queens previous to uniting, the defeated leaders were cast out of the hives next morning. Since then the bees have worked out and filled with syrup two more standard frames each, both fitted with full sheets of foundation, and when I examined the hives about eighteen days ago, I found in each large patches of healthy brood, and only recently (November 11) I noticed the busy workers were still carrying pollen into their homes. I am looking forward to a more successful time next year, always on the outlook for the first signs of foul brood, as, unfortunately, I am, I believe, in a foul-broody district. After settling the bees down, I broke up the combs, and drained out the honey through flannel, obtaining about 23 lb. (of which I send a sample), and after much mess and trouble obtained 1 lb. of fairly good wax. My first year's experience, full of difficulties, has only made me more determined to stick to bee-keeping, as I have already found it an interesting and instructive hobby.—F. T. Cox, Maidstone.

[An interesting start in the craft, and we hope your trouble will not break out afresh next year. The honey sent is dark in colour and coarse in flavour, so it is not suitable for marketing, but will do for home use. We shall be glad to hear from you again.—Eds.]

EXCLUDER ZINC BELOW SECTIONS.

[6527.] I am very pleased to see so many readers of our valuable little B.B.J. confirming my views on the non-use of excluded zinc below racks of sections at the late conversazione of the B.B.K.A. Like "D. M. M." (who writes on page 452), I was surprised to find that the chairman and others at the meeting should wonder at anyone working sections without excluders below them. For myself, I can say I have never used excluder below sections, and have not had brood in any yet. Not only so, but after putting on a good many racks of sections for people in this district, I have had no failures in that direction. I spoke out at the meeting because of thinking that we should make things as simple as we can for all who kept bees.

We have had a fairly good season in this part of Kent, my average being about 40 lb. per hive; and the colour is good, but not comparable to that one sees on the show-benches, the colour and appearance of which takes one's breath away. I never can get any way near the best samples shown, though I live in the midst of clover and raspberry fields.—Geo. Dow, St. Mary Cray, Kent.

SWARMS AND LARGE HONEY-YIELDS

[6528.] Your contributor, "D. M. M.," Banff, seems to have quite misunderstood me when writing his article for B.B.J., October 18 (p. 414). If Messrs. Herrod and Woodley had known that the swarms sent by them to "D. M. M." would have gathered them surpluses of 89 and 107 sections respectively, I again say they would have been "philanthropists." I happen to know the district around Luton, and I also know that between London and Leicester the honey-flow is over by St. Swithin's Day.

Rendering Wax.—I find the best and cleanest way is to have a tin dish (not less than 3 in. deep or less than 13 in. one way) that just fits your kitchen range oven; now a tin or wooden strainer 6 in. deep or more, to fit into the dish (flannel serge makes a first-class straining material). Pack the combs closely—inverted—into the strainer, and place in position, first putting a pint or so of water in the lower dish, to prevent burning. A "roasting" oven is best—that is, with the heat passing over the top. By this plan I get every particle of wax out of comb—usually clean—in frames. The above refers to old pollen-clogged combs. But, of course, it answers perfectly for cappings and odd scraps of comb. But with "cappings" I use merely a warm oven to drain the honey out first, before rendering the wax.—A. Harris, Wavendon, North Bucks.

P.S.—I notice an error in my letter on p. 394 *re* size of drone-cells. I gave the size of four cells to an inch and one-eighth, 36-32, that is, 9-32 to each cell.

WAX EXTRACTING.

[6529.] I think the bee-man who writes under the nom de plume of "Buzbee" (6515, page 466), does not get much help of a reliable character when he refers to "A Staffordshire Bee-man" (6491, page 444), who makes the remarkable statement that he extracted 8 lb. of wax from thirty-four old combs, or nearly ¼ lb. per frame, by the old-fashioned process of boiling. He challenges anyone to obtain anything approaching that proportion by the use of a "Gerster." Well, I might say I challenge anyone to get that proportion of "pure wax" from thirty-four old combs by any method. They may get 8 lb. of wax and rubbish. I did not like to let this go unchallenged, as these unverified statements are very misleading, especially to beginners.—F. Coates, Cirencester, November 26.

INTRODUCING QUEENS IN OCTOBER.

[6530.] Thanks for your prompt reply to my query in B.B.J. of November 1 *re* a "newly introduced queen's ceasing to lay" (3427, page 439). I had often introduced queens before, but never had one to cease laying so soon after her introduction, and that was why I troubled you. Your instructions were followed, and the combs examined carefully on the following Saturday, when "bees were flying freely," and I was very glad to find on one of the centre combs the fine young queen which I had introduced. Before writing you, I had once thought of ordering another queen at once, and caging her over the frames for a few days, which plan would, of course, have been like courting disaster, as certainly the new queen would not have been accepted, besides the possibility of having the reigning queen injured in the conflict with her rival. This experience—to me—again verifies the saying that "Bees do nothing invariably," and teaches us to be slow and sure in deciding matters pertaining to bees.—T. A. J., Flintshire.

CAPPINGS OF COMB.

By L. S. C., Ilkley, Yorks.

Pronunciation (p. 451).—This authoritative list appears open to criticism. At least, doctors appear to disagree. When a word has passed into common currency, it does seem absurd to attempt to force the living word to don the garments of the dead one. Strictly speaking, we might make two syllables of stipe, but surely, apis must remain a-pis, and chitine is ki-tin. Crabonidæ is mis-spelt three times, and should be crabronidæ. Malpighian would taste better with the G in "pigeon" than with that in "pig," but we may not choose. "Pig" is the nearest that our English tongue will allow. May Malpighi forgive us! Tarykeeah looks like Arabic, and appears to have no justification in either Greek or English. Modern medical usage is tra-chea, and there is no time nowadays to roll a letter to the extent indicated, though no doubt we should speak in—shall we say—Banff, of the "Beritish Bee Jouranal"!

Tobacco for Bees, and Bee-escape Cones (p. 452).—There is no doubt that the effect of tobacco is to cause the bees to "fume furiously"! Or become, as dear Lewis Carroll would say, "frumious." "Dazed, stupefied, with bodies distended, and suffering serious pain." Why, brown paper will do the same! How well I remember when I was a boy, how I tried. Bit, haud yer whist o' sic a subject!

Then about "cones." If much work be done in the apiary, and nuclei abound, the ordinary bee-escape cone is a positive nuisance, unless it has a spring to prevent the ingress of robber bees. Mine are now all plugged up, and will remain so except under necessity.

Tests for Beet Sugar (p. 452).—It may be that modern beet sugar differs from the original quality, but Mr. Cowan is most emphatic on the question of its unsuitability for winter food. Substances may be chemically alike, but actually very different, and the only real test of such a matter is in practice. Good wintering is not, however, solely a matter of the fluid food, and improperly considered tests may easily give fictitious results. In face of Mr. Reid's obstinate advocacy of beet sugar, it would be interesting to have full particulars of Mr. Cowan's tests.

That article by J. M. Ellis, headed "A Painful Subject" (p. 454), is amusing. Doleful bee-keepers might mark the number, and read it again when they are dull. From information received, I understand that the victim has not run so fast for years. May I recommend "J. M. E." to erect a miniature rifle range for those bees, with a clockwork equestrian target, and a council rubbish notice to the effect that "Stings may be shot here"? Possibly the target might be worth scraping every winter for the sake of the "Rheumatikiller"!

Profit-sharing (p. 455).—The rate of pay suggested is too heavy for the first year, this being half the bees and half the honey for the labour. Such an agreement ought not in fairness to be terminable at the end of the first season. Usually the bees and their increase remain the property of the sleeping partner, whilst the working partner provides half the cost of marketing, including sections or jars.

Queries and Replies.

[3439.] *A Case of Robbing.*—I have been a reader of your valuable paper some time, and also possess a copy of the "Guide Book" and have realised the amount of useful information you give. I now venture to ask if you would reply to the following. In the early days of September a fairly strong stock in one of my frame-hives was suddenly attacked by a great number of robber bees. I at once referred to the "Guide Book," and put a piece of glass before the doorway, contracted the entrance-slides, etc., etc., but I had to carry out all precautionary methods recommended before I was successful in stopping the depredations. A few days later I looked into the hive to see the extent of damage, and found three frames, comb and honey, destroyed, also enough dead bees to fill a pint measure. I send a few for inspection, with what I take to be a queen bee. There are two empty queen cells in the hive, but I failed to find a queen. I looked

again a few days later, but failed again to find her; but was pleased to see eggs and brood in all stages on one comb, so the queen is evidently all right. There is about enough bees left to cover four frames, and as I have fed the bees well do you think they will live over the winter? There is about 10 lbs. of honey still left in hive. Would you kindly tell me if the bees sent are the ordinary English bee? This is the second season that I have had bees of my own, so you will know I have a lot to learn. Name sent for reference by NOVICE, Birmingham.

REPLY.—We see no reason why the stock should not live over winter, but it would be well to move the hive a little way from its present stand when the bees have been confind indoors for some weeks by cold. This may prevent another attack in early spring, and should be carefully guarded against, as a second onslaught would ruin the stock. The bees sent were a mixed lot (hybrids, etc.), but chiefly the ordinary brown bee. There was a queen among them, looking very like a virgin, but we could not say for certain. It is a clear case of robbing and a partial slaughter of the robbers.

[3440.] *Material for Hive Making.*—1. I should be obliged if you will kindly tell me what real advantage there is to the bees in using "yellow pine" instead of "yellow deal" for the body-box and floor board of hives. As a beginner in bee-keeping, I am amusing myself this winter in making some hives. I have a number of your publications as well as others, and, of course, take in the B.B.J. but up to the present have found no explanation as to why yellow pine is used instead of yellow deal. I can afford to pay for either wood, but do not care to waste money. Hence my troubling you. 2. Are there any stamps or special cutters made for cutting out the "W. B. C." metal ends? Name enclosed for reference.—"ALPHA," Purley, Surrey.

REPLY.—We think you are confusing yellow deal and white deal. 1. There is no difference between yellow pine and yellow deal, both being the same. On the other hand, the common deal is known as spruce, which latter is a very inferior wood for hive-making, and should never be used for that purpose. 2. The "W. B. C." end is punched out from the sheet of tin at one stroke of the cutting tool, as is subsequently the process of folding the piece of tin into shape, but the machine is altogether too costly for home use.

[3441.] *Leaking Honey Valves.*—The honey valves or taps of my Extractor, Ripener, etc., leak more or less. They are of the ordinary "treacle valve" type. It is neither nice nor desirable to have honey dripping about the place, and I should very much like to stop this nuisance before another season. I therefore ask. 1. Can any of our readers assist me in this by detailing a plan of how to make the valves fit perfectly so as not to leak? 2. I have just read with considerable interest the booklet "Bee-keeping, its excellence, etc.," by "S. J." Can you inform me please what has become of this gentleman? It is of course, some time since it was written.—A REGULAR READER, Derby.

REPLY.—1. Honey valves (commonly known as "treacle taps") are rendered leak-proof by having the two faces of the tap ground perfectly flat, and if the movable handle of the tap works close and rather tight when the supply is cut off, there should be no leakage. You should inform the maker of the machine of your trouble, and he will no doubt put the thing right. 2. The last time we heard of our friend, the reverend author of the booklet, named S. J., he was engaged in congenial clerical work in Jamaica.

[3442.] *Bees Clearing Unfinished Sections Outside.*—I should like to know if during this mild weather, it would do the bees any harm, my putting some unfinished sections (about 50) in my bee-shed, which is about 100 yards from the apiary, for the bees to clear out preparatory to next season? I make this inquiry because the bees are flying all day, and a few bringing in pollen from the furze on warm days. On inspecting the bees at the beginning of last month I found they were in satisfactory condition with plenty of stores; the only thing to say against the present activity is that when they are flying daily they will consume more food. I put in each hive a 2-lb. cake of soft candy in the middle of last month, but do not like to disturb them till the spring. I have only been two years keeping bees, and succeeded in getting 500 lbs. from fifteen hives this year, but I started badly with a lot of poor hives. My best hives were from Mr. Sladen, of Dover, and upon clearing I took 165 lbs. each from them.—Name sent for reference, "Beginner," East Devon, Nov. 25.

REPLY.—No harm will arise from allowing the bees to clear out the unfinished sections as proposed, but if other hives than your own are near at hand the bees from them will assist your own in the work of clearing out the honey. For reply re honey samples see "To Correspondents" column.

Notices to Correspondents & Inquirers.

Letters or queries asking for addresses of manufacturers or correspondents, or where appliances can be purchased, or replies giving such information, can only be inserted as advertisements. The space devoted to letters, queries, and replies is meant for the general good of bee-keepers, and not for advertisements. We wish our correspondents to bear in mind that, as it is necessary for us to go to press in advance of the date of issue, queries cannot always be replied to in the issue immediately following the receipt of their communications.

[*** Mr. J. Barrow, writing from Oadby, Leicester, says:—"Your correspondent, W. J. Farmer (page 418), is quite right. What are called 9-inch boards are only 8⅞in. But it is quite possible to get 9in. full boards in yellow pine."

"SCOTIA (Perthshire). Dealing with Bees in Skeps.—It would be better and more profitable policy to winter the swarms in the skeps they now occupy, and sell them outright in spring. To drive the bees so late in the season for uniting to other stocks, as proposed, would be a risky proceeding, and getting the honey from the skep combs by pressing will be a very messy job in cold weather, to say nothing of

the extreme difficulty of making it fit for marketing in glass jars. In fact, we doubt if you could find a purchaser for it. (2) There is considerable risk in getting bees that have been for some time queenless to accept an alien queen and bees so late in the year. The weather conditions are all against doing the job well, at this season.

"HUDD" (Yorks).—Wintering Bees on Unsealed Stores.—If the stocks are all as strong as stated, and the honey is from heather, we do not think the bees will take any harm if there are two or three partly-filled combs in each hive for clustering on. Good heather honey is not nearly so watery as sugar syrup, so there need be little fear of dysentery.

W. POLLARD (Silsden).—Candy Making.—Sample No. 1, though made by "an amateur," is far better than No. 2 (bought from "a dealer"). The latter is hard as stone, and useless as winter food for bees. No. 1 only needs a little more boiling (and more stirring while cooling off) to make it a good candy.

A. H. P. C. (West Byfleet).—Supposed loss of Queen.—No bee of any kind was enclosed in letter. We kept the matter in view for a day or two hoping to hear again, when letter got aside and overlooked, hence delay in reply.

H. B. (Kerby).—We cannot tell what the "mixture of beeswax" sent consists of. It seems to contain such items as beeswax, lamp black, and maybe tallow, but only an umbrella maker who uses it, or analysis, would determine the point.

NOVICE (Penistone).—Starting Bee-Keeping.—All the information you require will be found in the "Guide Book," price 1s. 8d. post free from this office.

G. C. (Sheffield).—Straining Honey.—The usual way of removing honey from combs without the help of an extractor is to slice the combs and place in a flannel or fine muslin bag. This bag is then suspended in front of the fire, and as the honey is thinned down by the warmth it percolates through the bag into a vessel placed below.

F. W. D. (Woodford).—Preventing Swarming.—The objection to confining the queen to her hive by means of excluder zinc is an insuperable one. It has been tried repeatedly, always ends in failure, and not seldom in disaster at swarming time.

T. H. (Derbyshire).—Honey Selling.—If the honey sold to you was like sample forwarded to this office, we have no hesitation in saying the same honey never took prizes at the shows named. Your remedy would lie in the County Court.

Honey Samples.

W. D. T. R. (Kingswinford).—You cannot penalise the tradesman for labelling honey as sample "Choicest Strained Honey," even if the quality is far from being of the "choicest" grade. The sample of granulated honey sent, so labelled and sold at 6d. per lb., is probably imported from South America—reminding us of Chilian—is by no means "choice," and it is already beginning to ferment, but it is "honey" nevertheless, and may be sold as such to people who care for such stuff.

E. T. K. (Amersham).—The "peculiar taste" you mention as being noticeable in sample is, we fancy, from the yellow-flowered weed commonly known as "ragwort" or ragweed. It generally flowers just before the clover begins to fail, and not seldom spoils the honey from that queen of bee-plants the white or Dutch clover.

T. E. (Waddesdon).—A very fair sample of granulated honey; well ripened, and will not be liable to ferment. It is not quite so smooth in grain as we like, but a good marketable honey.

S. NYE (Sutton).—Your sample is dark and thin, with a very poor flavour; it has, in fact, been "spoilt" by the method used in extracting. We should use it as bee-food only.

BEGINNER (East Devon).—All three samples are from mixed sources, and show more or less evidence of the bees being within reach of heather. No. 1, except for being rather thin, is a very nice heather-blend honey, though it is beginning to granulate. No. 2 has a more distinct heather flavour, but there is a slight acidity that makes us fear for its keeping properties. No. 3 is fully equal to No. 1.

Suspected Comb.

EXPERT (Weston-super-Mare).—We regret to say the comb sent is affected with foul brood of virulent type.

*** *Some Queries and Replies, &c., are unavoidably held over till next week.*

Special Prepaid Advertisements.

Twelve words and under Sixpence: for every additional Three words or under, One Penny.

EXCHANGE COOPER INCUBATOR, 120 eggs, good working order, for healthy bees in frame-hive.—C. SMITH, Cuba House, Parliament Road, Ipswich, Suffolk. U 52

WANTED, 25 or 30-EGG INCUBATOR. Exchange good stock bees on eight frames, in new W.B.C. hive. Expert's report healthy.—L. MATTHEWS, Great Rollright, Oxon. U 53

SPLENDID GRANULATED HONEY, screw-cap jars, 9s. dozen, £5 gross.—H. DILWORTH, Shangton, Kibworth. U 66

EXTRACTED HONEY, fine light coloured, in 28lb. tins, 54s. per cwt. Sample, 2d.—A. E. ROWELL, Ashdown, S. Walden.

PURE MINORCA, also LEGHORN COCKERELS (black), 5s., 4s., 3s. 6d. each, or exchange honey. Pure or cross bred Pullets, cash.—ALSFORD, Bee Expert, Haydon, Sherborne. U 57

FINEST LIGHT HONEY, 4lb. tins 3s.; Sections, 7s. 6d. dozen.—L. POLLARD, Haynford, Norwich. U 56

EXTRACTED ENGLISH HONEY, 13s. per 28lb. tin. Sample, 2d.—DUTTON, Terling, Essex. U 55

FOR Sale, three strong healthy STOCKS, in bar-frame hives, cheap, £3 the lot.—MORRIS, Shirley Warren, Southampton. U 54

Editorial, Notices, &c.

REVIEW.

"*Don'ts and Whys in Bee-Keeping.*" By G. C. Dunn (London, Henry J. Drane, 1s. net).—Notwithstanding the number of books and other publications dealing with bee-keeping, the author says there seems to be something wanting, and he has endeavoured to supply that need in the little book just issued with the above title. The contents are intended as "warning posts," and in his "Don'ts" Mr. Dunn gives brief details, connected with practical work among the bees, which should be avoided. In the "Whys" appended to each "Don't" we are given the reasons why. He tells us what to avoid doing, and the reasons, derived from experience in his own apiary. In this way useful hints are given, from which bee-keepers—especially beginners—cannot fail to derive advantage; and we strongly recommend a perusal of the booklet before us as interesting and useful reading during the winter months.

Correspondence.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

Communications relating to the literary department, reports of Associations, Shows, Meetings, Echoes, Queries Books for Review, &c., must be addressed only to "THE EDITORS of the 'British Bee Journal,' 8, *Henrietta-street, Corent Garden, London, W.C.*" *All business communications relating to advertisements, &c., must be addressed to* "THE MANAGER, 'British Bee Journal,' *Office*, 8, *Henrietta-Street, Corent Garden, London, W.C.*"

*** *In order to facilitate reference, Corresponderts, when speaking of any letter or query previously inserted, will oblige by mentioning the number of the letter as well as the page on which it appears.*

BEE-KEEPING IN THE TRANSVAAL.

[6531.] The enclosed letter from Miss Mary Ritchie, Science Mistress, St. Anne's College, Natal, together with her article appearing in the "South African Poultry Journal," of September 21, which we send under separate cover, may interest your readers, and if so we shall be glad if you will find space for its insertion in the B.B.J. Kindly return the letter after perusal and oblige.—CAIRNCROSS AND ZILLEN, Pretoria, S. Africa, November 12, 1906.

DEAR SIRS,—The bee-notes herewith (from *South African Poultry Journal*) will show you with what interest we read the account of your visit to the Orphanage at Irene, which apeared some time ago in the BRITISH BEE JOURNAL. I have been interesting the girls at St. Anne's in bee-keeping, and we, too, have had many fine times dislodging swarms. I am sending a copy to Mr. Beardmore.

I have an apiary on the coast, but only of native bees. I was very pleased to see from the *Transvaal Agricultural Journal* that at last Italians had been brought safely to this country, and should like to know what you think of them, in comparison with our bees?—Yours sincerely,

MARY RITCHIE,
Science Mistress.

St. Anne's College, Natal,
October 31, 1906.

BEE-KEEPING IN THE TRANSVAAL.

One of the most interesting of recent photographs in the BRITISH BEE JOURNAL, at least from an educational standpoint, is a view of the Transvaal Government Orphanage Apiary at Irene—about twelve miles south of Pretoria. The apiary, which consists of twenty-five hives, is located on a broad green lawn in front of the buildings. Each hive is on a separate stand, while a large observatory hive—higher than the others—stands in the centre. A teacher and two small boys are seen handling the frames; the others are watching in little groups from the drive.

Mr. Cairncross, of Pretoria, who took the photograph, gives an interesting account of his visit to the Orphanage. It was more by accident than design, it appears, that the children at Irene first became bee-keepers. About a year ago a swarm of bees—as is the way of swarms in South Africa—chose to come indoors, and took possession of the dormitory. The Kaffir boy hived them successfully in a Nestlé's milk box. The children, writes Mr. Cairncross, were in high glee, delighted with the idea of catching and hiving bees in this way, and ere long, when opportunity offered, they scoured the veldt in search of swarms, and were successful in finding several colonies located in trees, crevices, in rocks, ant heaps, and elsewhere. On these discoveries being reported to the master, he bought an English hive for use as a model, also "The British Bee-keepers' Guide Book," and then gave his head boy, Dan Roux, instructions how to proceed with hive-making. Assisted, of course, by a number of other youngsters, for this boy is only fourteen, hive-making was soon in full swing.

"The late Lieut.-Governor, Sir Arthur Lawley, and Lady Lawley—who is a bee-keeper were frequent visitors at the Orphanage, and when they were leaving

South Africa her Ladyship presented Mr. Beardmore, the principal, with her three colonies of bees."

"Apiculture is taken as one of the school subjects and systematically taught. To make this more interesting, sketches, paintings, and drawings, are entered, along with all other notes on the subject. This with the practical experience in the apiary gives the children a keen interest in the work. Mr. Beardmore's idea is to give the boys a 'hobby' in life, and bee-keeping he believes will not only prove an interesting but remunerative pastime."

How many other schools in South Africa, I wonder, have started bee-keeping on such up-to-date lines?

Biology, says a modern writer on the subject, is not what they teach at Oxford and Cambridge, but watching the living bee. Nature is not a mere dead form to be dissected and analysed, but something *alive* to be loved and admired. The secret of all successful Nature teaching is to teach, not primarily through knowledge, but through delight. Children are ever ready for adventure, but aimless walks bore them horribly. They will trudge miles to study a grape-vine in the *autumn*. The action of tendrils is *real* when it carries the bunches just above their reach and invites a perilous climb to get the fruit.

To awaken children to the beauties of their surroundings, to find an interest for them in the country—and there is nothing so interesting as living things—to give them a peep into the wonders of Nature, is surely sufficient reason for the establishment of an apiary in every school, even if there is nothing so delicious as honey-comb to look forward to. In a new country like South Africa, with a limited number of bee-keepers and bees unlimited, such training as that given at Irene will provide for many a delightful and profitable occupation in after years.

Dr. Edward F. Bigelow, instructor in "Nature-Study" at the Teachers' Institutes of Pennsylvania, Delaware, Ohio, Michigan, and California, has done much to popularise this study in America, and show the value of bees from an educational standpoint. He has lately designed a hive for the use of schools and colleges, called the Bigelow Educational Hive complete in every detail for educational purposes, also a small model hive called the Pearl Agnes, with frames about the size of section boxes, for the children to play with. Outside it has the appearance of a doll's house, the feeder is arranged in the chimney, so the juvenile bee-keeper becomes a veritable Santa Claus. But no school need wait for a five-guinea observatory hive to begin bee-keeping. In most parts of South Africa wild bees can be had for the taking, hive, bee-book, and smoker can be purchased for a guinea, and children's veils cost 6d. each."

[We are very pleased to again have news of Miss Mary Ritchie, and of her continued interest in "the bees." Readers may remember several racy and pleasant articles from her pen in Vol. 29.—EDS.]

NOTES BY THE WAY.

[6532.] *The Art of Judging.*—Your correspondent, "Libra" (6486, p. 441) surprises me in writing of Mr. H. W. Seymour as a "honey dealer." This, I opine, must be a new development on our friend's part. I know he has had to buy out a neighbour who would sell his honey considerably below market price, and who would not sell a dozen or a gross of 1-lb. jars cheaper than he did a single jar, and when the price was 7d. each, no wonder a retailer was tempted to clear him out.

The method delineated by "Libra" confirms my previous note on the difficulty of judging a large class of honey when each exhibit should be tasted. We now learn that judges start from opposite ends and pass in the middle, but I cannot see that it makes any difference, as the same number has to be dealt with as though the two judges followed each other along the exhibits tasting each consecutively. Then "Libra" says the palate "gets a rest when judging comb honey." Are we to understand from this that the choicest edible we have—the one the wise king admonished his son to "eat, for it is good"—should be judged for appearance only, and not be tasted to see if the contents are really honey? I will add a line to say I believe that if sections were judged for quality of contents instead of appearances the prizes would be differently placed.

Successful Swarms.—One of your correspondents has compared Mr. Herrod and myself to "philanthropists," because we sold swarms of bees. I have done the same regularly since 1879, and every year have had reports of the well-doing of many and the "extra takes" from the few. But in my case these big "takes" are from natural swarms, in the hands of bee-men who know how to utilise the labour of the new stocks, coupled with a good honey district, and of what is of greater importance still, a spell of good bee-weather enabling them to put their eagerness for work to secure the best results.

I have in previous vols. of the B.B.J. asserted that I had no use for excluder zinc under racks of sections, and I rarely get any with brood in, perhaps four or five per 1,000, and then only where combed sections are used as "baits" to entice the

bees into them. This endorses the statement of "D. M. M." (6449, p. 452).

Why are we to produce miniature sections for use in restaurants? It seems to me this is an opening for the "tall section" with the thinner combs. These could easily be cut up into squares or cubes, and served in small glass dishes holding about 1 oz. The 1-lb. sections would cut into fifteen "cubes," or a well-filled one into sixteen. Thus the 1-lb. sections at 8d. would give the restaurant-keeper a good profit, and even with granulated extracted honey the same can be cut into "cubes." I feel sure that these small sections of honey cannot be produced pound for pound so cheaply as 1-lb. sections. In saying this I am thinking only of the interests of bee-keepers in advising the non-adoption of these miniature morsels, as an experiment or a "fad," to see what can be done. It may be well in the hands of the few, but to the man whose work in the apiary means his "bread and cheese," I feel that they can never be a source of profit.—W. Woodley, Beedon, Newbury.

BOARDS FOR HIVE-MAKING.

PREVENTING BRACE-COMBS.

[6533.] I may be thought rather heterodox in my opinions, but I consider the standard depth of 9 in. for hives, and 6 in. for shallow-frame supers, is $\frac{1}{8}$ in. too deep. I make my own hives, and have done so for nine years past. In early days I made them the standard depth, with the result that I often had brace-combs built between supers. Latterly, I have reduced the width to $8\frac{7}{8}$ in. and $5\frac{7}{8}$ in. respectively, with very satisfactory results. Brace-combs are very seldom built now, unless where bees are cramped for space, which condition I do my best to avoid by giving room in advance of the actual need.

I fix my runners 7-16 in. from the top of sides, this just allowing room for the ordinary "W. B. C." end, while $\frac{1}{2}$ in. is too much. Thus there is still a space of 7-16 in. below bottom of frames, which is quite sufficient, if not still too much. The same principle is applied to the body-box *mutatis mutandis*.

If Mr. W. J. Farmer feels disposed to adopt this plan, his so-called 9 in. boards will be wide enough, I should imagine. It is, however, necessary to see that the boards are thoroughly dry when made up, or they will shrink considerably when the heat from the colony evaporates their superfluous moisture.

Your correspondent, "Alpha" (344, page 479), mentions "yellow pine" in contrast with "yellow deal." The editorial reply rightly tells him they are identical. But it occurs to me that by "yellow" deal he may mean "red" deal, and not "white." While the latter is quite unsuitable, the former—or "red" deal—will make a very good hive, though it is heavier in proportion to bulk, and with more knobs, than yellow pine. If the latter can be bought as easily as the "red," I should strongly advise "Alpha" to secure it. I say "if," because I know from experience that "yellow pine" is not stocked by timber merchants in all districts.

May I say, for the information of your correspondent, and readers generally, that while I use yellow, or red indifferently for body-box, all outer cases, and roof, I make use of old boxes for shallow-frame supers. I fine Tate's Cube Sugar cases are very handy; both sides and ends can be utilised, and they answer as well as if made of more costly material. Further, let me say to amateur hive-makers, put thick paint in every joint before nailing them together, and you may then defy the rain to do its worst; of course, not neglecting to paint the hive externally with at least two, but preferably three, coats of best oil paint.—W. H., Brilley, Hereford.

ODDS AND ENDS ABOUT BEES.

CHEAP QUEEN-MATING.

(*Continued from page* 458.)

[6534.] I make no pretence to pose as a queen-breeder by selection, further than to say that, in artificial rearing, I utilise larvæ from what I consider my best black queen of the previous season, and in this hive I tolerate as little drone-brood as possible. The chances of in-breeding with me are small. It is, however, a question whether in-breeding is an unmixed evil. I do not know the technicalities of cattle-breeding and poultry-breeding, though I have been intimately acquainted with all that is ordinarily known of these subjects for more years than I have been a bee-keeper; and the only point I think pertinent to the analogy is that I know many farmers who, by paying more attention to the care of their stock than to a "long pedigree," can show returns that leave nothing to be desired. A successful Ayrshire dairy farmer, who now lives upon his fortune, recently told me he never had a "show coo in his byre." His standard of beauty was conceived from the daily yield in the "luggie." I admit he would have been foolish to mate his sires with their own offspring, and, of course, never did so. How far a "pedigreed" stock of cattle excels an unpedigreed one as milk-yielders under similar treatment is infinitesimal, if it can even be proved to do so.

In my course of bee-keeping I have pur-

chased a large number of queens at a cost never exceeding 5s. 6d. each. I may say that the price does not seem flash, and I may be told that a 25s. queen would have made a difference. But when I say that I have purchased from some whose names are well known, and bear the stamp of integrity, I have had no reason to complain, or do I think anyone would be justified in carping. Anyway, I can unhesitatingly assert that none of these queens have ever distinguished themselves more than any home-reared queen. It has satisfied me with a change of blood, and I have no doubt the general principle of cross-breeding was furthered.

My best yield of 104 lb. was from a home-bred black queen, and "I have yet to learn" that expensive queens are superior to any ordinary well-developed one mated with a drone capable of yielding the maximum amount of vigour and stamina to his offspring.

Recapitulation.—The method I have outlined in my two previous contributions is simple. The boxes for mating (sketched on page 458) are handy, and contain only 216 cubic inches, which is lessened when the frames are inserted. The frames are strong, and will last as long as any standard frame. I employed a "Swarthmore" frame and cages for holding the queen-cells until hatched. I made one to fit in a shallow frame, so that I could either hatch in the brood nest or above. No brood in any shape whatever was employed, so that your correspondent "Apis" (6510, page 464) has quite mistaken the idea. The queens were all from one to two days old, and no patches of larvæ or sealed brood given. There is nothing to chill.

Some observations on the behaviour of young queens will keep until another week. —D. V., Dunaskin, N.B.

FEEDING GEAR.

[6535.] In the B.B.J. of November 15, your correspondent "F. J. H." (6505, page 456) tells how one of his friends secures what I know should be absolute control over the bees at feeding time in winter or at any time. I use the words "absolute control" without hesitation, as you can well understand how the bees cannot get up through the zinc to annoy any person on the other side of it. My own method of bee-feeding has for years been similar to that described, yet to some extent better. I do not use calico over the mouth of the feed-bottle, but more open-meshed material, such as the coarse lining used by dressmakers; cheesecloth should be equally good. When following the plan of outside feeding, I usually hang 2-lb. glass jars outside, near to the hives, and this causes no disturbance whatever among the bees. When feeding inside the hives I use a flat board of wood of about 8 in. long, 4 in. broad, and $\frac{3}{8}$ in. thick (instead of a "frame" as described on page 456), in the centre of which I cut a $2\frac{1}{2}$ in. hole, extending to within $\frac{3}{4}$ in. of each end of the board, or sufficiently long to allow the bees access from, say, four frame-spaces when the feed-board is laid on top of the comb-frames. The hole in the feed-board, although $2\frac{1}{2}$ in. at the centre—in order to allow many bees to cluster under the feed-bottle—narrows towards the ends to about $\frac{3}{4}$ in. wide, so that it is cut in the form of an elongated oval, thus forming a stiff, unbreakable feed-board when the perforated zinc has been tacked down to the upper side of it. By giving a strong hive access from four frame-spaces to a $2\frac{1}{2}$ in. diameter feeding-space, the bees will take down 2 lb. of syrup in as many hours. A feed-board with narrower (but not shorter) feeding-space, restricting the access to the feeding-bottle, is required for slower feeding. Two weeks' feeding in late March or early April, and another fortnight's supply in late September or early October, is sufficient for strong hives in spring and winter respectively. An unusually mild winter, with bees out often, may mean candy-feeding in February.—D. Macdonald, Girvan, N.B., November 28.

PROFIT-SHARING IN BEES.

[6536.] I notice that your contributor, "L. S. C.," in the last par. of his "Cappings of Comb," page 478, refers to my letter in B.B.J. of November 15, page 454, written in reply to a question on "Profit-sharing," in your issue of November 8. "L. S. C." says:—"Usually the bees and their increase remain the property of the sleeping partner." I don't know what custom prevails in Yorkshire, but that does not obtain in this part of the country. In fact, the custom here is known as half shares, not as "profit-sharing."

I have read up the matter again as stated by myself, and think the apportionment is a fair one. I am sure "L. S. C." would not get anyone here to take the job on the terms of his proposition. In my view, "T. S." would do better to keep his bees and run them on his own account than take a partner on less favourable terms than I suggested, considering that he has to take the whole of the duties and market the honey. He would only have that to do if he kept out of the partnership, and the returns would be all his own. The labour of seeing to nine

(*Continued on page* 486.)

HOMES OF THE HONEY BEE.

THE APIARIES OF OUR READERS.

The neat little bee-garden seen below—along with the owner and his wife—may, we suppose, be termed the nucleus of a large apiary intended to occupy the same ground ere long, concerning which Mr. Apthorpe says:—

I may call this my first year of real bee-keeping, although I made a start in 1904. In that year I began by purchasing a swarm in a skep from a neighbour. This was left severely alone till 1905, when it was placed above the top bars of a single-walled frame-hive for the bees to transfer themselves. It unfortunately happened during subsequent manipulation the queen was lost, and so the "transfer" missed, and the bees had to be united to a colony of driven bees. My aforesaid neighbour being very old (about 85) decided to clear his bees out last year, and I bought the lot, consisting of one frame-hive and several skeps. Some of the latter supplied the driven bees for the hive already mentioned, and at the end of 1905 I possessed two stocks in frame-hives and four skeps. During last winter I bought a "W.B.C." hive from a worthy amateur bee-keeper and hive-maker, and from this pattern I made five more. Thus in the spring of 1906 I was able to substitute the two W.B.C. hives for single-walled ones, and transfer the skep bees to hives of the same pattern. The small hive seen in photo. was held in reserve for a swarm if one came off. But I had no swarms, as the bees were given plenty of room in advance.

I like my hives on legs, and to have calico-covered roofs, these being cooler in summer and quite rain-proof. I cannot refrain from telling you mine is intended to be an up-to-date apiary. The hives hold ten frames with plain top-bars, and each has two dummies; all frames "wired" and filled with "weed" foundation fixed to top-bar by molten wax. I found Mr. Macdonald's method of clearing quite a success. I have also had to watch the wax-moth larvæ, which have been my worst enemy so far.

Mr. W. Herrod gave a course of lectures in this village last winter, from which I gained much information besides being able to claim the lecturer as a friend to whom I can go for much valued advice.

I find the "hobby" most interesting, and also that yields a fair rate of profit; this year has been a good one for honey, no doubt, in our locality.

I had the hardihood to venture an exhibit of extracted honey at the "Confectioners'" Exhibition and although not a prize-winner, I was not at all ashamed of my twelve jars at the Show; as one bee-keeper remarked "there was more credit in failure at a London Show than success at a local one." However, I hope for the latter at least, in the near future.

Wishing your valuable paper a continued success and even a still wider circulation."

MR. C. G. APTHORPE'S APIARY, HARLINGTON, DUNSTABLE, BEDS.

(*Continued from page* 484)

hives of bees properly for a season is quite worth the "valuation" the sleeping partner would pay. Of the two, I would prefer to be the sleeping partner, if my co-partner was consistent and dutiful. I know what attending to as many as nine stocks of bees means in time alone, besides the extracting, marketing, and other minor messy details.

"L. S. C." draws the line at the partnership of the "increase of stock," but it means labour to see to them, and does not the worker earn his share in them? Besides, the bees are "profit" quite as much as honey. Let us at least be logical.

I also note, on page 478, that "L. S. C." states "the rate of pay is too heavy for the first year," and the partnership ought not to terminate at that period. I made it quite clear that the worker must give a season's services before he earned his partnership; and in justice to the sleeping partner it should be a continuous partnership for a few years at least, and all costs of accessories should be equally shared. I have known partnerships run here for quite fifteen years with skeppists. — CORINTHIAN, Cornwall.

REMOVING BEES FROM TREES.

[6537.] If of sufficient interest to B.B.J. readers, I will be glad if you will insert the following account of how I got two lots of bees out of hollow trees. In the first one, the bees had located themselves so high up that it took a thirty-staved ladder to reach the entrance hole. When I got up to them, I found there was a slit in the tree, but not large enough to admit my hand; so I puffed in a few whiffs of smoke to quieten the bees, then set to work enlarging the slit, by chopping away with hatchet and chisel. In this way I soon made it wide enough to get my hand in and reach the combs. But the first one I got hold of broke off and dropped down, as if it had gone into a deep well! So I descended to the ground, and made some pointed sticks with which to form a rest, so that I could get a second hold of the combs in case of a slip, for, owing to the warm weather at the time (August), the combs were very tender. It luckily happened that there was a large limb of the tree just opposite to the entrance hole, and on this limb I fixed a box, the bottom of which was forced partly off, so as to make an entrance for the bees into the box. When I had got all the combs, with most of the bees adhering, into the box, I put a couple of the pointed sticks (after smearing with honey) into the hollow part of the tree, and thus made a connection between the box and the tree, and in less than half an hour every bee had gone into the box, and the job was done.

The second lot I captured only a fortnight ago (November 19), when I had to act somewhat differently. The hollow tree in which the bees had located themselves was dead, so I had less trouble to get at them. In fact, a few vigorous strokes with an axe, and I soon got at the bees, as they were only about 10 ft. from the ground. I went provided with a couple of wooden buckets and a skep. In this case the combs were so tough that I could not manage to break them away from their top attachments, so had to sever them where I could, brushing the bees into the skep and putting the combs into the buckets. I measured the aperture or hollow part of the tree, and I found it to reach 2 ft. above the spot where the bees entered, and 1 ft. below, going up to a point like a pyramid. It was only 8 in. across at the widest part. You may just imagine a comb 3 ft. long (or high). It would have been a curiosity for illustrating in the B.B.J. if I could have got it away without breaking. When my task was finished I had two buckets full of comb, which when heated and strained yielded 23 lb. of honey and 11 oz. of wax. I had to go again to the place where the tree was next night, in order to gather up the straggling bees, which hung about the spot all day, but had clustered at night. I put a tin beneath them then, and after some trouble secured them. I may say I sweetened the owner of trees with some of the honey. Bee-men must not leave that out if they operate.—I remain, dear Sirs, yours very truly, JOSEPH HULBERT, Heckington, Lincs.

P.S.—I have so often seen the question, "How to get bees out of hollow trees," asked in B.B.J. and *Record*, so thought would give readers my experience.—J. H.

"KING'S ENGLISH."

[6538.] Is it not rather a pity that your occasional but useful contributor "W.H." is quite so critical and complaining in his letter (6518, p. 472)? The expert he criticises seems to me to have given an intelligent report of the work in his district, though without the grace of literary finish or perfect construction of sentences. That he was sent out to help bee-keepers in their work is the fault of the Staffs B.K.A., if fault it be. Why he was not sent out to instruct the public in the uses of honey, or to push its sale, as a Staffs B.K.A. commercial traveller, I do not know. That, if a honey-producer, he pushed the sale of his goods I can well believe; but if this is "grinding his own axe," well, "W.H." does the same, and

very successfully. Doubtless this county expert would have to push his own sales in his own time, in this respect, too, acting just like "W.H."

But a much wider question is opened by the quadruple and uncomplimentary allusions to "experts," in the letter referred to. I scarcely fail to see, in these, strong disparagement of the B.B.K.A. Board of Examiners. Of that Board I have sufficient experience to know that it so hedges up even the Third-class Certificate that no one gets it but a practically safe man or woman. For the Second Class Certificate the theoretical knowledge of bees and bee-keeping is much wider and, as the examination is only met by written answers to questions, the candidates, to be successful, must be able to write such passable English as to make himself understood. That men without good education (and this examination only presupposes a "fair" education) can grapple with such matters as the anatomy of the honey-bee successfully, speaks volumes for their intelligence and application. I believe it is not unknown that men of culture fail in this examination. Still further advance is indicated by the First Class Certificate, with the ability to lecture on any branch of bee-keeping that the examiners choose. And it is only at this stage that the examiners require evidence of a "good" education. Their reasons are obvious and sound. In our own Association I have had my share in the appointment of third and second class men, and first, too, for district work, and not one has ever proved incapable of doing his work, or of reporting sensibly to his committee.

If "W.H." chiefly wishes to emphasise the need of popularising the use of honey he may be reminded that the B.B.K.A. and all its branch associations expend much money in shows for this purpose, besides using all their influence to put consumers into touch with producers where necessary.

I send name, etc., for reference.—S. J., Bristol.

[6539.] Will you kindly allow me space for a word of reply to your correspondent, "W. H.," whose note appears on page 472 last week? The writer was evidently not in the best of humours when he read my letter (6512, p. 465). I must have unconsciously touched a sore place. My sole object was to draw attention to the fact that the duties of experts, as I know them, are to make better bee-keepers, not to increase their number, as he says. By so doing they are able to find a better market for their produce, in addition to being able to produce more cheaply and also put it on the market in proper form. I maintain that there is a market for good English honey so put up, the only difficulty being to bring producer and consumer together. As to the particular words your correspondent complains of as being "misread or misunderstood" (which may or may not be my mistake), "W. H." may consider himself justified in using the very strong words his letter contains, but when he writes of experts "having an axe to grind," I am at a loss to know what idea he has in view, seeing that he tells us in words that I call "grinding his own axe," what he has been doing for the last ten years.

Bee-keepers may find a difficulty in some neighbourhoods in getting rid of their surplus at a good price, but when we know that the best men in the craft are able to "sell out," and at a decent price, it shows that it is the unfortunate ones who have to suffer loss and disappointment from causes which it is not always in their power to improve upon or prevent.—J. PRICE, Staffs.

[We have another letter on the above subject, and expressing much the same views, from Mr. J. P. Phillips, Hon. Sec., Worcestershire B.K.A., who will no doubt agree with us that the case is amply met above.—EDS.]

HIVING DRIVEN BEES.

[6540.] It seems strange how "doctors differ." We have, on page 471, "D. M. M." sticking to his guns by stating that hiving driven bees above frames is reprehensible for many reasons, and then we have one who signs himself "Expert," on page 475, going just the opposite. For myself, I may say, having driven and hived hundreds of stocks, I have come to the conclusion that the "top of frame" plan is most to be depended on. If the hive is a "W. B. C.," or similar, one, the space round body-box should be temporarily filled with some soft material, so as to keep the bees out of it, and in ninety-nine cases out of a hundred no difficulty arises, if the instructions given on page 475 are followed. In all cases I consider it best to have the "lift" on hive before shaking in the bees, if possible. The cloth, or dust-sheet, should be dropped inside the "lift," so that its weight is on the bees. (I have generally used cheese-cloth, or whatever material has been used to fasten the bees in the skep for bringing home.) Then a sack laid over the top of all to keep stragglers in or out, and there you are! I have often found trouble when running bees in at the bottom, and it has generally been when two queens have been present. One will have run in with her bees, and the other, with hers,

would persist in staying outside—under the porch, generally. A case of this kind happened with a neighbour only this autumn, and he called on me to put them right after the bees had been in two lots, one out and one in, all night. I send name for reference.—NONDESCRIPT, Notts, December 3.

[Being one of the "doctors" who agree with "D. M. M." in differing with our friends "Nondescript" and "Expert," we add a line to say that we should never dream of hiving either driven bees or swarms on any other plan than the orthodox one followed by nearly all the experts and bee-men with large apiaries to deal with we have met during our more than forty years' experience of bee-work in all its forms. Much, of course, depends on the operator himself, seeing that some bee-keepers—even of long experience—have not the same methods of handling bees as are now practised. At the same time, it is better that "doctors" should "agree to differ," and allow everyone to follow the plan most suited to his own method of *handling* the bees. Our own methods are fairly well illustrated in the "Guide Book."—EDS.]

SUDDEN DEATH OF L. BARBER, Esq., J.P.

While preparing for press, the following letter reached us, and we are sure its contents will be learned with deep regret by many readers, along with ourselves:—

DEAR SIR,—I very much regret to inform you of the sudden death of our chairman, Lewis Barber, Esq., J.P., which occurred at one o'clock this afternoon on his return home from a week-end visit. I will endeavour to send you some further particulars for your next week's issue.—Yours faithfully, R. H. COLTMAN

December 3, 1906.

NOVEMBER RAINFALL.

Total, 3.68 in.
Heaviest fall, .72 in., on 8th.
Rain fell on 22 days.
A very mild month, free from fogs.
—W. HEAD, Brilley, Herefordshire.

CAPPINGS OF COMB.

By L.S.C. Ilkley, Yorks.

The Chapman Honey Plant (p. 456).—This round headed hedgehog of a nectariferous giant is highly decorative as well as remunerative. But what a name! "Echinops sphaerocephalus!" A bee with any respect for its mandibles might well hesitate to pronounce upon the quality of its banquet! Be, in fact, *utterly* deterred! This ought to have been incuded in the recent list of jaw-breakers.

"Clausterised" (p. 459).—Our vocabulary seems to be still growing. If this word be coined to refer to the Claustral device, I would advise that a large internal entrance may be used with advantage. This question of entrances is solely one of ventilation with due regard to conservation of heat. Thus, in the ordinary way, it may make a slight difference which way the combs run, and a hive having an "eke" does not require so large an entrance as one in which the combs are close to the bottom board.

Cleaning-up Sections (p. 462).—It is evident that a rack might hold the full number of sections if four bee-way sections were used, as the bees could then traverse the whole rack. Mr. Woodley evidently uses two bee-ways, and the bees are admitted to the central row through the feed hole of quilt. If however, the quilts were drawn back so as to uncover the ends of the brood-frames, perhaps the work might be done with a full rack of this pattern. I think that our friend "D.M.M." once suggested this.

One to the Queen Breeder (p. 464).—It is well worth noting that since this bee-keeper began to purchase queens from the specialist breeders his takes of honey have doubled! One would like to have the exact figures. If the apparent conclusion be not modified by the increased experience of "Apis," then this is the finest advertisement that has appeared in the Journal for some time.

Snake in the Grass (p. 465).—One would have thought that a bee-keeper would be immune to such trifles as vipers venom. But it may be that the poison is not the same as that of Apis hypodermica! Chemistry has not yet succeeded in accurately determining it. A cross between a viper and a vicious virgin queen should produce a fairly virulent hybrid! It would, indeed, "an adder be" to our worries, whilst even the armour-plated smoker might bellow for mercy in vain!

INTERESTING EXTRACTS.

(From a Treatise "Concerning the Right Use and Ordering of Bees.")

By Edmund Southern, Gent., A.D. 1593.

"I remember once there was a gentleman, a very friend of mine, which had good store of bees, unto whom the parson (who yet liveth, and I feare is one of Martin Malapert's house), came and demanded tythe bees. 'Tythe bees!' quoth the gentleman, 'I never yet payd any, neither is it the custom in this parish, and I am loth to be the first that shall bring it up, and yet I am very willing

to pay my due; honey, money, and wax you shall have, with all my heart; but bees cannot be told, therefore how shall I pay them?' 'Told, or not told,' quoth the parson, 'or due or not due, I will have the tenth swarme, and you were best bring them home to my house.' 'Why, then, I might deceive you,' quoth the gentleman, 'and bring you a casting or an after swarme for a whole swarme.' 'Well,' quoth he, 'honey, money, and wax shall make amends for that.' 'But you can never have profit of those bees if they be castlings,' quoth the gentleman, 'which I bring you.' 'It is no matter for that,' quoth the parson, 'this is neighbourly you.' 'Which shall be done,' quoth the gentleman. It fortuned within two daies the gentleman had a great swarme, which he put into a hive, and towards night carried them home to the parson's house; the parson, with his wife and familie, he found at supper in a faire hall; the gentleman saluted them, and told the parson he had brought him some Bees. 'Imary,' quoth the parson, this is neighbourly done; I pray you carry them in my garden.' 'Nay, by troth,' quoth the gentleman, 'I will leave them even here.' With that he gave the hive a knock against the ground, and all the Bees fell out. Some stung the parson, some stung his wife, and some his children and family; and out they ran as fast as they could into a chamber, and well was he who could make shift for himself, leaving their meate upon the table in the hall. The gentleman went home, carrying his emptie hive with him. On the next morning the Bees were found in a quickset hedge by a poore man, who since hath had good profit of them, and is yet living. Within foure daies after the gentleman was cited to appear before the ordinary, who, when he came, demanded why he had used the parson after that manner? 'Why, Sir,' quoth the gentleman, 'I have not misused him, to my knowledge.' 'No!' quoth the parson, 'did not you make your Bees sting me and all my folks?' 'Not I,' quoth the gentleman; 'but you would needes have a swarme of Bees, the which I brought you home, according to your own request, and left in your hall, and since I saw them not.' 'I' but,' quoth the ordinary, 'why did you not let them alone in the hive?' 'So I would,' quoth the gentleman, 'if they had been in my own garden.' 'Why did you not let the parson have the hive?' quoth the ordinary 'I could not spare it,' quoth the gentleman, 'for I bought my hive in the market, and I am sure, as covetous as he is, he can have no tythe of that. I buy in the market according to English laws; but I did by his Bees as he willed me, and as I have done by all his other tythes, which I have ever left in his hall, and so I did these; and yet there was no Bees ever demanded for tythes in our parish till now; and besides, the statutes for tythes in this case provided, is on my side; but honey, money, and wax he shall have with a good will.' 'And that is not much amiss,' quoth the ordinary. So noting the circumstances of every case, gave sentence that both of them should stand to their own charges. So they were contented, and afterwards became friends, and if they do not well, I pray God we may."

Transcribed by (Mrs.) E. A. B., Devon.

Queries and Replies.

[3443.] *Uniting Bees in November.*—May I ask your advice on the following? I have four stocks of bees in frame-hives, I have never attended to them myself, and they have been neglected this year by the man whose duty it was to look after them. From No. 1 stock we took eighty-four well-filled sections. No. 2 yielded me thirty-three sections and one crate of eight shallow-frames, from which I extracted 32 lbs. good honey. No. 3 only filled ten sections; while No. 4 stored no surplus. I had another man in to examine the two last-named stocks a week ago, which we found badly infected with the wax-moth. There was very few left, no brood, and hardly any stores. No. 3 was also troubled with wax-moth, but not as bad, very little brood, but a fair amount of stores. We removed three of the worst frames from No. 4, cut out the most faulty ones of the others, and gave instead what stores there were left, closing in the vacant space with a dummy board. We also gave both the weak stocks some scented syrup, and, after removing the quilts, placed a piece of paper, perforated with small holes, on No. 3, and then set No. 4 on the top, to try and unite the bees in this way, but three days later the front-board was covered with dead bees and small pieces of comb, while the hive entrance was choked up. I cleared all this débris away, and freed the entrance, when the bees began to come out strong. I had another examination to-day, and there were no bees at all in the bottom box, but the top one was full of bees. Will you therefore please say in your journal: 1. Did I do the right thing in joining them together in the manner given above? 2. Shall I have to feed them this winter, or will the bees go down and fetch the stores from bottom box? I send name and sign—ANXIOUS, Northants.

REPLY.—Your mistake, or "fault," lay in the method adopted for uniting the two lots of bees. The weaker lot has evidently been exterminated; but as they were described by yourself as "very few bees" no great loss has resulted.

[3444.] *Bees Carrying Pollen in December.*—Last Thursday (November 29), being a warm, mild day, the bees from my hives were flying very freely, and from one stock the bees were flying in and out just as they do in

spring. But I distinctly saw three bees go into the particular hive mentioned carrying a considerable quantity of pollen. Is not this unusual considering the time of year? I have never noticed pollen carried into hives so late as this before.—F. WM. WETHERALL, Worcester, December 2, 1906.

REPLY.—It is not uncommon to see bees actively at work at this season in such abnormally warm weather as prevails just now. There is also an unusual quantity of ivy bloom this year, and from this the bees get both honey and pollen.

[3445.] *Bees in Roof of Building.*—I have been a reader of your valuable paper for some years, and have realised the amount of useful information you give in it. I now venture to ask if you can help me in the following difficulty? Under the lead roof, betwixt same and ceiling of a square building a colony of bees took up their abode some few years ago, and this summer appeared to be exceedingly strong. The entrance is a very small hole in the building side, which is stone. I should like to know if there is any method of capturing the bees without damaging leaden roof or ceiling?—J. T. G., Derbyshire, December 3, 1906.

REPLY.—We can under the circumstances, suggest no plan of capturing the bees that we should care to follow ourselves, and so would prefer to either leave them alone or plug up the hole and let them die out. It would be possible to capture the bees by constructing a rough box made to hold 4 or 5 frames in which a nucleus colony with queen could be hung up to the side of the stonework of house if convenient. If this plan was decided on, a Porter bee-escape could be fixed at the back of the box and the bees in roof be compelled to pass out through the escape. They would thus have to fraternize with the nucleus lot and so be utilised. But "the game would not be worth the candle," and, must of course, involve starvation and death to the queen now in the roof, so we should choose the first alternative.

Notices to Correspondents & Inquirers.

T. E. C. (Redruth).—Heather from Seed.—Of course, heather like other plants is raised from seed, and probably a seedsman could supply seed of the common ling "Calluna vulgaris." Our correspondent asks, "if any of our Yorkshire friends could oblige with a few rooted plants;" perhaps some Yorkshire reader may be able to say.

J. B. L. (Lanark). Making the W. B. C. Hive.—We cannot see where your difficulty arises, or do we think you will have the trouble feared if the directions given in the "Note-book" are carefully followed. When packed for winter, the roof is used along with one "lift" as shown in the illustration (page 54).

H. W. L. (Wolverhampton).—Creating a Market for Honey.—The two really tangible methods open to bee-keepers for disposing of their surplus honey are (1) personal effort in your own district as given from time to time by bee-keepers in our pages, and (2) the use of our prepaid column. With regard to price, you will find that that very largely depends on the quality of your sections, both with regard to appearance of the comb and flavour of the contents of same. A perusal of our prepaid column gives a good idea of prices.

Honey Samples.

W. S. (Hamilton).—Sample is from the true "Ling," but a little mixed from other sources, being not so good in consistency as the highest quality of heather honey. All the same it is a good sample.

*** *Some Queries and Replies, &c., are unavoidably held over till next week.*

Special Prepaid Advertisements.

Twelve words and under Sixpence: for every additional Three words or under, One Penny.

3 CWT. LIGHT COLOURED HONEY, in 28lb. tins, 56s. per cwt.; tins free.—SHENAON, Hds. Bosworth, Rugby. U 82

15 DOZEN SECTIONS to clear, 7s. per dozen; packed f.o.r.—PULLEN, Ramsbury, Hungerford. U 82

PURE CAMBRIDGESHIRE HONEY, mainly Sainfoin, in jars, 14lb. tins, or in bulk; also a few Sections.—Apply for quotations and samples, stating quantities required, to J. HOWLAND, Brampton, Huntingdon. U 80

WELLS HIVE, complete, stocked with bees, on eight frames. 30s.—PICKERSGILL, Bishop Monkton, Leeds. U 78

LIGHT CLOVER HONEY, £2 16s. per cwt., packed free.—COMLEY, Dynevor Place, Fairford, Glos. U 77

FOR Sale, 1,000 lb. of Finest Light-Coloured Hampshire HONEY, from Sainfoin and Clover. In tins, 7lb., 14lb., 28lb., and 56lb., at 6d. per lb.; screw-cap jars, safely packed, 8s. per dozen; either in bulk or quantities to suit customers' requirements; free on rail; sample, 3d.—T. NORRIDGE, Ash Cottage, Abbotts Ann, Andover.

FOR Sale, ten "W.B.C." SECTION BOXES; condition nearly equal to new. Price, 25s. the lot.—SOAL, Rochford, Essex. U 74

FOR Sale, 3 cwt. LIGHT EXTRACTED HONEY, in 14 lb. tins, 56s. cwt.—ARTHUR ADCOCK, Meldreth, Cambs. U 84

LIGHT COLOURED GRANULATED HONEY, in glass jars, and 28 lb. tins.—J. CUCKSEY, Elderberry Farm, Mildenhall Road, Soham. U 83

SECTIONS, best quality, light, large quantity. What offers?—CLOUGHTON, Maldon, Essex. U 72

FINE YORKSHIRE HONEY, principally Heather, 10 dozen 1 lb. screw-cap jars, 10s. dozen; sample, 3d. CLOVER SECTIONS, 9s. per dozen, f.o.r.; five prizes this year. Cash or deposit.—STREET, Dishforth, Thirsk, Yorks.

PHOTO., Etc., 3d.—The most scientific portable heating apparatus ever intended for small Conservatories; 24 hours without attention. No fumes. 10s. 6d. to 16s.—T. HOLLIDAY, Astbury, Congleton. U 69

Editorial, Notices, &c.

TO FRUIT GROWERS.

DANGER FROM GOOSEBERRY MILDEW.

We have received the following communication from the Board of Agriculture and Fisheries, with a request for its insertion in the BRITISH BEE JOURNAL:—

The Board of Agriculture and Fisheries have received information that the American Gooseberry mildew (Sphænorotheca mors-uvae) has been discovered in more than one place in England, and as there is reason to believe that the disease, in at least one case, is of some years standing, they think it desirable to warn all fruit-growers, nurserymen, gardeners, and other growers of gooseberries of the dangers involved. The disease, which is termed American owing to the extensive damage it has done in America, is of a very serious character, and has rendered the culture of gooseberries unprofitable, and practically impossible wherever it has appeared

The mildew generally becomes visible during the last half of May or the first half of June, when it appears in the form of "glistening frost-like spots" on the fruit on the lower part of the bush where there is usually dense shade. It then spreads to the leaves and tender shoots. In its earlier stages it has a cobwebby appearance, which soon becomes white and powdery from the development of the light conidial spores. Later in the season the leaves and other parts affected turn a rusty brown. The fungus prevents the berry from growing, and the fruit becomes worthless. All during the summer, therefore, the disease can easily be detected, and the bushes can be dealt with according to the extent of the disease. But during the winter the disease remains dormant, and will not spread from plant to plant. During this period, however, it can be conveyed from one district to another in bushes and stocks. It is clear that enormous and irreparable mischief may be done in this way, and it is the duty of all nurserymen to take precautions not only for their own sake, but for the sake of the locality in which they live.

The Board of Agriculture and Fisheries, therefore, urge all nurserymen and market gardeners who intend to buy bushes or stocks of Ribes aureum, whether from abroad or from Ireland, or even from other growers in Great Britain to observe the following precautions.

1. Only to purchase from those growers or dealers who are prepared to offer a guarantee that the plants they are selling are of their own growing, and that no case of American Gooseberry mildew has ever appeared in their gardens or in the immediate neighbourhood, and that the said plants have not been near any gooseberry plants recently brought on to the seller's premises.

2. To plant such gooseberry bushes or stocks as they may buy or acquire from other premises than their own in a special part of their nursery or garden at some distance from other gooseberry bushes.

3. To destroy all plants found to be affected with the mildew and to spray with Bordeaux mixture all others suspected of being infested with the object of destroying any external mycelium or adhering spores that may be present. This should be carried out during the period when the disease is dormant.

4. To keep a careful watch on all gooseberry plants in the forthcoming spring for any signs of mildew, and to report any appearance suggestive of the disease to the Secretary of the Board of Agriculture and Fisheries, 4, Whitehall Place, London, S.W., immediately it is detected.

5. To assist the Board in discovering any unreported cases of the infestation during the past summer.

There is at present no law dealing with the eradication of the pests of fruit trees in this country, but the Board believes that the American Gooseberry Mildew has not spread very far as yet and that it depends very largely on the action of the fruit growers, nurserymen, and market gardeners whether its further development can be prevented.

LANCASTER AGRICULTURAL SOCIETY.

Editors, BRITISH BEE JOURNAL.

DEAR SIRS,—We beg to inform you that at a general meeting of the members of the above society, held on November 16 last, the date of the show for next year was settled—viz., Wednesday, August 21, 1907. The probable dates of closing of entries are: General stock, August 7; poultry, August 12; and dogs, August 15. We shall be glad if you will announce this fact in your paper, and insert dates in any show lists you may be publishing.—THOS. ARMITSTEAD AND SON, Secretaries, 2, Victoria Chambers, Penny Street, Lancaster.

CROYDON AND DISTRICT B.K.A.

The monthly meeting of the above association was held at the Social Room, in rear of the Free Christian Church, Wellesley Road, on Thursday, December 6, and was well attended by the members. Mr.

Pay (a bee-keeper of forty years' standing) presided, and, in referring to the pleasures of bee-keeping, said he hoped the newly-established association would flourish. Personally he thanked the originators for the good work they had done. Mr. W. F. Hosegood then read a brief paper on "The Queen Bee," after which an interesting discussion took place on the merits and demerits of the Italian bee. A nice display of prize honey, wax, and up-to-date appliances was exhibited by Mr. J. Kachler, showing, among other things, the straw skep in its various improved stages up to the modern hive. Mr. Jask, Chief Librarian of Croydon Free Libraries, kindly sent an assistant with a parcel of bee-books, which members were allowed to borrow for a fortnight. Many took advantage of the offer. Votes of thanks to Mr. Hosegood and Mr. J. Kachler brought an interesting meeting to a close. The next meeting takes place on January 3. A. WAKERELL, Hon. Sec.

HONEY IMPORTS.

The value of honey imported into the United Kingdom during the month of November, 1906, was £1,320. — From a return furnished to the BRITISH BEE JOURNAL by the Statistical Office, H.M. Customs.

Correspondence.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

Communications relating to the literary department, reports of Associations, Shows, Meetings, Echoes, Queries, Books for Review, &c., must be addressed only to "THE EDITORS of the 'British Bee Journal,' 8, Henrietta-street, Corent Garden, London, W.C." All business communications relating to advertisements, &c., must be addressed to "THE MANAGER, 'British Bee Journal,' Office, 8, Henrietta-Street, Corent Garden, London, W.C."

**** In order to facilitate reference, Correspondents, when speaking of any letter or query previously inserted, will oblige by mentioning the number of the letter as well as the page on which it appears.*

AMONG THE BEES.

THE EVOLUTION OF THE BEE-HIVE.

(*Continued from page* 393).

[6541.] Bearing in mind the fact that up till about fifty or sixty years ago straw was the almost universal material employed in making homes for the honey-bee it will be necessary to dwell for some time on this form of hive. Bonner, 1795, a very able bee-master, who was intimately acquainted with all the forms of hives then in use, concluded that "experience proves straw to be rather preferable to everything else"; and Hulsh, even in 1844, who knew more about the different styles of hives than any other man in his day, deliberately chose straw as the material for constructing the hive to which he gave his name. He records his opinion, "Of all the materials which have been used for the making of hives, the conviction is strongly impressed upon me that straw is by far the best." Later it will be necessary to describe this hive.

Leaving out of consideration the "hollow oak" of Virgil, the Roman consul's "hive of very clear horn," those made of osier twigs daubed with clay, and those tubes of "cylindrical form" made of tiles in which bees were kept, it may be enough for our present purpose to begin with those used from the apicultural dawn in our islands, which dates from about 1600, and taking as a type Butler's "Ideal" hive we have one of the best then known. It was, in fact, the old dome-built skep almost in the identical shape and form still to be frequently seen. Here is his own description:—"The bees best defend themselves from cold when they hang together in the manner of a sphere or globe (which the philosophers account the most perfect figure) and therefore the nearer the hive cometh to the fashion thereof the warmer and safer are the bees. But, of necessity, the bottom must be board, for the upright and sure standing of the hive, and for the better taking out of the combs. The top must rise some three or four inches higher than the just form of a globe to stay the hackle and throw off the rain. Otherwise, let your hive vary no more from this round figure than needs must. From the top to the skirts it should be 17 inches; in the middle, or widest part through the centre, 15 inches; and at the skirts 13 inches. This form with these dimensions, will contain three pecks, and the abatement of one inch in each direction abates a gallon in the contents. Hives are to be made of different sizes between five and three gallons, so that any swarm, of what quantity and time soever, may be fitly hived. Have hives of all sorts, but most of the middling size." Butler adds the interesting information that the best hives made in England in his time were constructed by "Tomas May, of Sunning, about one mile from Redding, and by William Harper, of Cudsen, about four miles from Oxford."

Taking a leap of about half a century we come, 1657, to Purchas's *Best* Hive:—"All things considered the straw hives are the best, and the bees do best defend themselves from cold when they hang round to-

gether in the manner of a sphere or globe. So then the hive hath the best shape, that is likest to an egg with one end cut off. It may consist of 'twelve strawen wreaths or cowls,' or more, according to bigness of the hive. Let the first three 'cowls' be of one magnitude and compass, the four next above them bellying out a little each beyond his fellow, that the combs may be more firmly fastened. Let the other five by little and little be narrowed to the centre at the top that it may be pyramidal. And after this proportion, if the hive consists of more wreaths, for this is the shape of a small hive. I have some consisting of seventeen or eighteen wreaths. However, let your hives be too little, rather than too great, for such are hurtful to the increase and prosperity of the bees. If the hive be too great, the bees will be more lazy working uncomfortably, because they despair ever to finish and furnish their house; but yet if there be a competent number of bees they will work industriously—though the vacuity be large—and complete as much with combs as shall be sufficient for them. But an over-large hive is prejudicial to their success. Hives are to be made of any size from a bushel to half a bushel."

I have been perhaps over-copious in the two foregoing quotations; but, if so, I have had a purpose. Even then the danger of having hives constructed of too great a capacity was appreciated. Our modern hives are not at all far from what Butler thought *ideal* and Purchas the best hive. Further, may we not here detect the original germ of the modern use of a dummy board, whereby we regulate the size of the hive to the strength, number, and ability of the swarm placed therein?

The number of different hives are already legion, and these articles can only afford kaleidoscopic glances at long intervals, so we again jump an interval of another half century. New ideas were simmering in men's minds, and humanity to the honey-bee had led to changes and improvements, but along another track than that we are now pursuing. About the closing days of the seventeenth century combs of "virgin" honey were obtained even from skeps. They had actually learned the art of supering. Hitherto, further space had been added by ekes, on the naidiring princ'ple, because these were placed below the hive. Now we have *capped hives*:—"Make your hives of two pieces to take off at the crown or near the midst of the hive, and when they have gathered and filled up their house, then take away the upper part and clap on a board." Again:—"Raise the hive with as many 'wreythes' as is needful to make the greater plenty and increase. Making your hives in this way the honey can be taken at all times, but especially when you perceive by the lifting of your skep that the bees are well provided with winter's provision, and that there is plenty of food yet to gather. Then cap them!" Here we have a species of placing one body box below another, and a super above. One section, the naidir one, was to be cut off with a string wire, placing a piece of parchment to follow the wire, to catch the running honey. I presume. The super and the nadir were judged lawful spoil for the bee-keeper, and the remainder was left as the "winter's" provision for the colony of bees.

"Capping" hives was, however, known earlier in the seventeenth century, for in 1655, we read: "In July *cap* your earliest swarms. In August cap your old stocks, for now they can bear it." — D. M. M., Banff.

PRONUNCIATION OF BEE-WORDS.

[6542.] Greatly to my regret, I find that in my very hurried perusal of the "proof" of "The Pronunciation of Words used by Bee-men," three mistakes, in addition to the two pointed out by Col. Walker, escaped my notice. In two of these the letter "r" is at fault. It should have appeared in "Crabronidæ," and have stood before, instead of after "a" in what would have read "traykeah." Also, the final letters in "ungwikuli" were reversed by the printer. With apologies for what must seem great carelessness, but was rather hurry to get the proof to you, as you were within an hour or two of going to press, I am, yours faithfully, W. H. H., Hayes End, Uxbridge.

[The above communication should have appeared last week, but, when preparing for press, the MS. by some means disappeared, and there was no time to procure another copy from Mr. Harris. We are glad to mention this, as the fault was not his.—EDS.]

DETENTION CHAMBER FOR BEES.

CLAUSTRALIZING.

[6543.] On September 4 I had a stock of bees driven from a skep, and put on two empty combs and four frames of foundation. These were put in position early on September 5 and fed daily. Three days later I noticed in the evening a considerable number of bees about the inside of the hive, the frames of which hung parallel to the entrance. There was also a "back door" in lower edge of the contracting board. Being unsatisfied with the appearance of things, I examined the hive next morning, when I found that by some oversight the front entrance had been closed for three clear days and four nights! The bees

had taken down the syrup each day, and there were only six or eight dead bees, notwithstanding the long confinement.

I had a similar experience with a stock in July last year. Having asked a labourer to come (very early or very late) and cut the weeds and grass around my hives, he was also told to close the entrances while at work. He came one morning and, as directed, closed the entrance to one hive—then for some reason he bolted! but did not tell me he had been; consequently I did not discover the closed hive for several days. Fortunately this hive, too, had a back entrance to vacant space. And the bees seemed none the worse for their long confinement. Twelve or fourteen dead only.

The lesson conveyed to me is that hives on this plan are far preferable to using a box fitted on in front, as in the "Claustral chamber." The vacant space being also open to the roof, with space between inner and outer case, there is plenty of ventilation. I find, too, it answers perfectly in feeding bees when there is any danger of robbing. Seven single lots of driven bees have been fed on white granulated sugar, and are now on six frames each of well sealed stores.—A. HARRIS, Wavendon, Bucks.

BEES "FANNING" AT HIVE ENTRANCES.

[6544.] As a very old and constant reader of the BRITISH BEE JOURNAL, perhaps you will allow me to bring to the notice of your correspondents a debatable point in bee-life, which I should much like to see elucidated. In a letter recently received from a well-known authority in apiculture and judge at honey-shows, commenting on "The Bee-Master of Warrilow," friendly exception is taken to a statement therein, that the fanning bees on the alighting-board of a hive are drawing out the contaminated air. This gentleman is of opinion that the outside fanners are driving in the fresh air, and are not creating an exhaust-current, as the Warrilow bee-man seems to imply. At the present time it is impossible to submit the question to the test of experiment, which would of course decide the matter at once. I should like, therefore, to ask your own opinion, and that of your expert readers, on the point. It has always seemed to me that the attitude of the fanning bees, heads towards the hives and their whole bodies leaning in the same direction, is proof that the flow of the air is outward. And I find, in looking through back volumes of the BRITISH BEE JOURNAL—a very favourite occupation with me in leisure moments—that the late Frank Cheshire was of the same opinion. Writing in 1873 (over thirty years ago; but time is of little account with the timeless honey-bee), he says, "the fanners at the door of a hive . . . . . toil at drawing out the carbonized oxygen."

Perhaps one of your readers has actually experimented on the direction of the air-current, and may be able to decide the matter.—TICKNER EDWARDES, December 8.

[Without knowing who "the well-known authority" and "judge at honey shows" may be, his view does not accord with our own observations. Nor do we think there can be any doubt on the question of the direction of "air-currents" when bees are "fanning." As a simple test, let anyone hold a lighted candle (on a hot summer's night) in front of a hive-entrance, and watch the flame; the outward current is, at times, strong enough to extinguish it. —EDS.]

MR. S. SIMMINS AND FOUL BROOD.

[6545.] With regard to your editorial note following my article, p. 474, in B.B.J. of November 29, please allow me to say I had no intention of asking your readers to believe I considered the late Mr. F. R. Cheshire discovered foul brood as a bee-pest. You will notice I referred to my own "discovery" of the plague as happening some ten years before Cheshire published the results of his researches. Even at that period I was only too well aware I was but one of a great army of sufferers that had gone before, and who had experienced in some cases even greater unfortunate discoveries (more recently Dzierzon losing 500 colonies). The disease described as "pestilence" by some of my old authors, was sometimes cured by the now well-known "starvation" plan; though more frequently the doubtful process of cutting out the diseased brood was resorted to. One does not usually say that foul brood is caused by foul brood, and my statement was to the effect that Cheshire discovered and named "Bacillus alvei," i.e.: the cause of foul brood. I suppose we must agree to differ as to whether or not he was an original discoverer of the hive bacillus and its methods of propagation; but as one who was then, as now, in very good company in that belief, I am content to do honour to the greatness of his work.

With regard to the little matter of Mr. Macdonald referring to the *Bee-keepers' Review*, that was quite evident, but I would point out that your esteemed contributor also referred to American apicultural opinion in general as being influenced by me, his words being "Mr. Samuel Sim-

(*Continued on page* 496.)

HOMES OF THE HONEY BEE.

THE APIARIES OF OUR READERS.

Mr. Gelder promises well as a bee-keeper, and has had the good sense to point out that to succeed, the bee-man must not shirk labour during the summer months. It is not often we find one man capable of producing so much in the way of home-made appliances as our friend, and judging by the photo, he does his work well. He says:—

"I am only a young bee-keeper yet, so I must not be giving advice, which is, of course, better left to older members of our craft. On the other hand a few notes concerning my bee-doings may not be uninteresting. I cannot remember when I was first smitten with bee-fever, but recollect, when a very small boy, catching bees and putting them into an empty skep in my father's garden, and then wondering why they didn't get on with their work! My first situation was at a place where bees were kept, and the hives were put in my charge, and when the time came for taking the honey I had a bee-expert to help me. This operation suited me so much that my small savings were invested at a sale by auction, one lot being a stock of bees in a skep, of which I became the possessor, along with a lot of out-of-date bee-goods. I made a wooden hive to fit over the skep (the first one on the photo.), and most of the others have sprung from it. Previous to this time I knew nothing of the Lincs. B.K.A., but soon after hearing of it I joined, and, with the help and advice of the hon. sec. and the experts, I got on very well indeed. The hives seen (numbering twenty-three), including one 'Wells' hive and an 'Observatory,' are all my own make, and were made by myself during the long winter evenings. They are after the 'W.B.C.' pattern, which I like best, and are all interchangeable.

"I am a tinsmith by trade, and I have made a point of covering all the roofs with zinc. I have also made my own extractor, honey-ripeners, smoker, etc., so I got all these items "on the cheap." The greenhouse seen in the background (which I use for honey-extracting and bottling) was also erected by myself, and here, under the shade of a Maréchal Niel rose tree—planted inside the house—I have extracted many cwts. of honey.

"With regard to my 'takes' of honey, I have several times secured over one hundred pounds from a single hive. I have also taken a good many prizes at local shows for honey, so may consider myself fairly successful. But bee-keepers must be prepared to spend long hours in the summer to make a success of the craft. The apiary seen is located in a sheltered corner of my father's garden, facing south, and the photo. was taken by our local schoolmaster, Mr. S. D. Butterworth. Wishing all connected with the craft a successful season in 1907."

MR. F. W. GELDER'S APIARY, STURTON-BY-STOW, LINCOLNSHIRE.

(*Continued from page* 494)

mins seems to be the chief authority on which American editors base their theory, etc." Consequently, my own reference to *Gleanings*, the only American journal to which I had contributed my articles on foul brood, does not appear to me to be out of order, more especially when it is considered the latter is one of the most influential bee-periodicals in the States and largely reflects that general opinion.—SAMUEL SIMMINS, Heathfield, December 7.

EXPERT'S VISITS.

HONEY SELLING.

[6546.] Referring to the subject of Expert's visits, may I offer a word of reply to your correspondent. No, I do not mind cracking nuts metaphorically, and as Mr. J. Price (6512, page 465) wants to crack one with me I will do so. He finds fault with me for what I said about experts. There are experts and *experts*. I have met some of the best, and do not doubt that he is one of the right sort.

I started bee-keeping in 1901 with no one to help me, but I carefully studied Mr. Cowan's useful "Guide Book," and later on read several others. Increasing my stocks gradually with increasingly satisfactory results, I became conceited enough to consider myself as well qualified to examine any hives, to ascertain their condition, as any third-class expert. Not only so, but I thought it possible that one day the B.B.K.A. might confer an Honorary Degree on me, as during the past two or three years I have assisted Mr. W. Herrod at several of his Bee Lectures in N. E. Herts. In view of this, coupled with what I have seen of the methods of the expert of the association to which I belonged, I deemed it prudent not to allow him to examine my hives, and eventually I ceased to be a member of the Association. I think it will be generally found that bee-keepers who work as many hives as I do (15 to 20), if they do join the B.K. Associations, do so not altogether with the idea of having to have their own stocks of bees inspected, but for the sake of others who have not the requisite knowledge and time to examine their own hives. With regard to the sale of honey, I find it is very difficult for the cottager to secure a market for his sections, and this is where co-operation should come in.

I have this year sold altogether 1,000 sections, and have had less difficulty than when I only kept two or three hives as I was then asked to quote for large quantities, which I could not do at the time – whereas my orders this year came in for two or three gross at a time. The cottager with a few hives is forced to sell his sections to the middleman, who must, of course, have his profit, and so only pays 5d. or 6d. per section, or less, to the bee-keeper. Honey, I am told, is sold here at 10d. per lb. in customers' own jars or bottles. So there is either a small supply or a great demand in this part. If honey could have been sold to the consumer, much would be done in the way of popularising it as an article of food; but at the present price at which it is retailed it must remain the luxury of the few who can afford to pay one shilling for a pound of honey, or for a 1lb. section.—H. NEWMAN, M.A., Teynham, Kent, December 5.

MIS-READINGS OF "KING'S ENGLISH"

A WORD TO MY CRITICS.

[6547.] Allow me, Messrs. Editors, to withdraw the parenthetical remarks re "experts" contained in my letter of last month (p. 472), since it seems possible to read into them, *vide* "S. J." [6538], page 486, a meaning than which nothing was further from my thoughts. I had not the least intention of disparaging the work of the B.B.K.A. Board of Examiners. In fact, they had never entered into my thoughts at all when writing my note.

My remark that the "expert" generally had an "axe of his own to grind," simply meant, that when your expert was your business competitor, it was contrary to human nature to expect him to do much to find a market for you. I "grind my own axe," and sometimes turn the grindstone for my neighbours while they sharpen theirs: the latter may be poor bee-keeping, but, at any rate, I don't receive any pay for doing it.

In regard to the general question upon which I first wrote (see p. 443), that "expert" help might be usefully employed to stimulate the use of honey by the public, I am still of the same opinion. Your correspondent, J. Price [6539], page 487, says: "There is a market for good English honey . . . . the *only difficulty* (italics mine) being to bring producer and consumer together." Now here surely is a splendid field for expert energy. What grateful thanks the "much-abused expert" would earn if he would remove this "only difficulty," which many honey-producers find so insuperable. Again, he says, "The best men in the craft can sell out at a decent price," but that "it is the unfortunate ones who have to suffer loss and disappointment from causes which it is not always in their power to prevent." Now, I cannot see why those "unfortunate ones," if they are members of a County Association, should not receive definite help in the direction most needed. Surely expert assistance would not be unwisely bestowed in removing some

of the difficulty with which those weaker brethren and sisters have to contend, by giving them the necessary introduction to the waiting consumer. I am assuming for the moment that there is such an individual, on the strength of Mr. Price's assertion. Why he doesn't scan the advertisement pages of the "B.B.J.," where he would discover a cheap means of obtaining an unlimited supply, is not quite clear. Those pages are an eloquent testimony to the truth of my words in your issue of November 8 (p. 443): "The more our English honey is driven by over-production into competition with the foreign supply, the lower must the price become."

Errata.—In my letter (p. 483, 2nd col., 6th line) your compositor has "knobs"; I wrote knots. In line 18, for "fine" read find.—W. H., Brilley, Herefordshire, December 10.

WOOD FOR HIVE-MAKING.

A TIMBER MERCHANT'S VIEWS.

[6548.] As a timber merchant, may I be allowed to enumerate the various kinds of suitable wood for hive-making plainly before your readers. 1. "Yellow Pine" means (in the Trade) Quebec Yellow Pine, and it is far ahead of any other kind of timber for hive and frame-making; but the price for first-class stuff is so high that it is fast being superseded by other kinds. The demand for the first-named timber has been so great that the forests are getting farther and farther away from the rivers, which makes transport very costly, and, in consequence, it is chiefly used now for high-class pattern-work for engineers, yacht's decks, and a few other kinds of work where cost is not largely taken into account. 2. "Yellow Deal, or Red Deal," means (in the Trade) "Baltic Red Wood," and is sold in many grades and sizes. "White Deal" (termed Baltic Whitewood), is not suitable for out-door work, such as hive-making, being liable to twist and split with the weather. 3. "Spruce." This is also a whitewood very cheap, but not good for hives; it is used extensively for packing-case making. 4. "Canary Whitewood" (or "whitewood" as it is often called) is an American wood, rather expensive; it is fairly free from knots and is largely used for "inside" work. 5. "Red Archangel." This is another grade of (No. 2) "Baltic Red Wood," and is, I think, the most suitable wood for hive-making, if "Quebec Yellow Pine" (No. 1) be not used. It comes from the White Sea ports, and the wood is of a closer nature than that from more southern ports. It is sold in 1st, 2nd, 3rd, and 4th quality, but in the two latter qualities (3 and 4) there are two many "Shakes," or faults in the wood for good work. The four qualities are sold in *deals* and *boards*, and I would advise bee-keepers to purchase 9in. or 11in. by 3in. deals, and use the outside boards for floor-boards of hives; the inside boards will be sounder for hive-sides, etc. I mention this difference because the outside boards from most deals have slight "Sun Shakes" which do not matter much in hive floor-boards, as the bees soon filled them up with propolis, and being nailed on the bearers they never split much after being nailed. I send my name for reference.—YELLOW PINE, Plymouth.

[6549.] I should like to thank your correspondent, W. H. (6533, page 483), very much for his kind advice with reference to my query (344, page 479) on the quality of the wood to use for hives.

Not being a timber merchant myself, I have now asked one of the largest timber merchants in London how it is I should be misunderstood in using the words "yellow deal," and he tells me that yellow deal is sometimes called in the north "red deal," but in London and the south, it is called yellow deal. It is quite a different wood to yellow pine, and comes from a different country. Yellow deal is far more largely used than any other wood in England for outside work. It is much cheaper, harder, and more durable wood than pine, and can be bought without knots. It also seems to me that yellow pine is not so cold to the touch as yellow deal, and I am wondering if the colder feeling in the wood has any prejudicial effect on the bees in an extremely cold winter?—ALPHA, Purley, Surrey, December 8.

SHOWS AND SHOWING.

[6550.] I had the misfortune to send an exhibit of sections and also one extract of honey to the chrysanthemum show held at Chorley on November 9, as advertised in your pages in "Shows to Come." I am pleased to say that my six sections obtained 2nd prize, and the six jars of extracted honey were "very highly commended," which is proof positive that they were delivered in good condition. But how do I receive them back? One bottle smashed and empty, and four sections ruined out of six! The reason for this is that, instead of being properly packed for return, the "packer" had crammed them anyhow into a box less than half the size of the one I sent them in, and there being no room for proper packing in the smaller box they were bound to get smashed up. I ask, is this what should be expected by exhibitors who send to shows advertised in your pages? My "outgoings" for that show, including value (9d. each) for one jar and four sections, came to 9s. 6d., and

the "incomings," *i.e.*, 2nd prize, 5s., so it left me with a deficit of 4s. 6d., *plus* the "honour and glory." Such was my experience of the final show for 1906.—F. G., Bassingbourn, Herts.

THE LATE J. L. P. BARBER, ESQ.

CHAIRMAN, DERBYSHIRE B.K.A.

With reference to my letter of the 3rd, inst., notifing the demise of our Chairman, J. L. P. Barber, Esq., J.P. I believe I am correct in saying that Mr. Barber's connection with bee-keeping, as chairman of the Derbyshire B.K.A., dates back to over 20 years, though he was only in his 53rd year. During the whole time of his chairmanship Mr. Barber was very rarely absent from a meeting, and he guided the Association through troublesome times, with conspicuous tactfulness and consideration for all; and in so doing he gained the respect of every member of the Committee.

Mr. Barber's methods were for peace, and it was wonderful how he could control and calm down angry disputants at times. No one was ever so missed, I think, in the town of Burton as the deceased gentleman. Religious and philanthropic societies on all sides are asking, "Who will fill his place? We of the D.B.K.A. regard his loss as irreparable."

The papers I send will give you an idea of the effect his loss has had on the whole community in the town. The funeral took place at the Cemetery, Burton, on Thursday, December 6, and was attended by representatives of nearly every public body in the town, including his Worship the Mayor, Deputy Mayor, several aldermen, members of the Town Council, besides many county magistrates and public men connected with religious bodies of the town.—R. H. COLTMAN, Hon. Sec., D.B.K.A.

[Though not personally acquainted with the late Mr. Barber, we have had evidence of his estimable character as a philanthropist whose main object in life was the cultivation of all that is good in his fellow townsmen. The Derbyshire Bee-Keepers' Association will feel very keenly the loss of their Chairman, for it is rarely given to anyone to hold the regard of every member as Mr. Barber did. We are glad to be the means of conveying the sympathy of readers, along with our own, to the family in their sudden bereavement.—EDS.]

CAPPINGS OF COMB.

By L. S. C. Ilkley, Yorks.

Clearing Pollen Clog.—I am wondering if I may not claim the distinction of having given the syringing method to the fraternity. I certainly discovered the method, and made reference to it in a bygone Journal.

Rendering Beeswax (p. 466).—Who likes this messy operation? Not "Mrs. Beekeeper," I warrant. The old-fashioned "bag, brick, and boiler" method is still a good one, but somehow the housekeeper fails to appreciate the necessary use of her "copper" for the purpose. Women were ever unsympathetic in such matters! There is a new extractor, by Mr. A. C. Miller, a very practical American bee-keeper. This has a rotary handle at the top, which permits of the agitation of the combs whilst boiling, so as to dislodge all the globules of wax. Whether this attains the ideal or not, I do not yet know, but the man who invents a really perfect extract-all-the-wax-while-you-wait-and-not-so-long-about-it-either machine shall have a halo of flying golden queens!

D.M.M. Extracts (p. 466).—These are always interesting, and we may feel grateful that there should be such a capable "chooser of the good." His note on "Gold from Bees," reminds me of a recent American skit in which the golden-all-over bees had stings of pure metal, and whose pollen lodes consisted of gold-dust! Artificial feeding was found to be rather expensive, I believe! As to sheep in the apiary, I have myself an out-apiary in which the barbed wire fence is high enough to allow of my landlord's sheep entering to graze, whilst heavier cattle are excluded. The arrangement is satisfactory to both lord and tenant.

D.M.M. must solace himself that his original writings are bread cast upon the waters and may feed someone. It is not always possible to quote one's authority, but it is a little annoying to find one's work pilfered without acknowledgment. The Australian pirate "clipper" seems to sail rather close to the wind in his pursuit of daily loaves and fishes. Grace before meat would sound well at least, Mr. Tupper.

Would D.M.M. give us the cost and plan of making those felt hive-hoods for winter protection?

Bee-escapes (p. 469).—In reply to J. G. (3437, page 469), the "R. H. Smith" clearer is not so easily fixed in a board as a "Porter" escape, but it is much more effective, if it be used the right way up, of course. A Porter escape-board, having a rim may, however, be greatly improved by the addition of a couple of ¼ in. strips leading from the rim to the edge of the hole. Bees running around the rim seeking exit are thus brought right to the escape.

Hiving Driven Bees (p. 471).—I am tempted to agree with D.M.M., although

he does attempt to hoist me with my own petard in the matter of shallow-combs, by ignoring the very important exceptions. After all, he is right in that the bulk of such instructions as these are for the beginner or the inexpert, and as such, should be simple and deal with methods least liable to accident. All the same, the next time I have driven bees to hive after dark, I shall drop them inside the body-box, not outside. Now, if only the house-wife would use a tun-dish of the right size, one might funnel them through the feed-hole!

Feeding Gear (p. 484).—Is not D. Macdonald mistaken in advocating strainer cloth to cover up the feeding jar? It is not everyone who can invent a wide-mouthed bottle covered with so coarse meshed material, without spilling a lot of syrup. It may, however, be done by the aid of a suitable slice, or shovel. [It is quite easy when you know "how."—Eds.].

Profit Sharing (p. 484).—I am obliged to your anonymous correspondent, "Corinthian" (or Cornubian), for his useful criticism. I do not know what is the Yorkshire "custom," and do not think that many bees are kept on shares of any kind in the county. We Yorkshiremen prefer, as a rule, to look after "wer' awn." The arrangement I quoted is the American form, and my note was perhaps a little brief. I specified, however, that the cost of marketing was to be shared, but where this work is done by the working partner, his share might be three-fourths. It is of course, to the working partner's interest to keep down increase, and he should have a free hand so to manage as to get the most honey, year by year. As the sleeping-partner would provide all hives, combs, etc., the working partner's interest in the increase would only be slight, but if any increase were sold he might rank for a share by agreement.

WEATHER REPORT.

Westbourne, Sussex,
November, 1906.

Rainfall, 4·95 in.
Heaviest fall, ·66 in. on 3rd.
Rain fell on 21 days.
Above average, 1·68 in.
Sunshine, 49·1 hours.
Brightest day, 10th, 6·5 hours.
Sunless days, 12.
Below average, 21·6 hours.
Maximum temperature, 59·5° on 22nd.
Minimum temperature, 28° on 19th.
Minimum on grass, 26° on 19th.
Frosty nights, 2.
Mean maximum, 51·3°
Mean minimum, 40·8°
Mean temperature, 46°.
Above average, 3·3.
Maximum barometer, 30·55 on 24th.
Minimum barometer, 29·16 on 19th.

L. B. Birkett.

Queries and Replies.

[3446.] *Extracting Candied Honey from Combs.*—I have just come into possession of a quantity of frames of honey, which latter is partially candied in the cells. I would be pleased if you can tell me how to melt the combs and extract the honey? Could I heat them in a gas oven; if so, to what temperature should I go; or can I put the combs to any other use; I would prefer to extract the honey if possible. Any information you can give me will oblige.—C. H. M., Lincoln December 7.

Reply.—You had better first cut the combs up into slices and put them into a strong bag of coarse muslin. The two methods available for extracting the partly granulated honey are with the help of hot water, or of dry heat, as preferred. In both plans the combs cut up into slices and subjected to heat about 90 to 100 deg. Fahr., will suffice and this does less damage to flavour of the honey than if a much higher degree is used. If hot water is used, put the sliced combs into an earthenware or tin vessels, and immerse the latter in a pan containing hot water for several hours, keeping the water as hot as the hand will bear. When combs and honey are thoroughly melted, withdraw pan from the fire, and when cold, the wax may be lifted off in a solid cake. If dry heat is used, place the sliced combs in a bag of flannel or strong muslin, and hang them in front of a good fire, with a vessel below to catch the honey as it drips through when thoroughly melted. The wax left in bag should then be immersed in a copper and heated to boiling point. The wax will then float on the surface of the water, and when left to cool may be lifted off in a cake.

[3447.] *Syrup Making, Painting Hives.*—I have kept bees for several years, and have been a reader of the Journal and the Record, but have not seen a reason given for the use of salt and vinegar in the preparation of syrup. Will you, therefore, kindly reply to the following queries in the B.B.J.—1. and 2. Why is salt used in syrup, and, for what purpose is vinegar used in same? 3. Is there any reason why hives should not be painted inside as well as outside, especially if you had a case of foul brood:- W. Ball, Stoke-on-Trent, December 7.

Reply.—1 and 2. To give the reasons "why and wherefore" of every item of bee-management would be an interminable task, but the known fondness of bees for salt may be given as the reason for using it in syrup. Vinegar is used to prevent the syrup from granulating. 3. No reason whatever, but it is not advisable to paint the insides of new hives. Later on, if disease is suspected, many bee-keepers paint the insides of hives as a means of disinfection.

[3448.] *Sending Bees to India.*—A doctor residing in Kashmir wants a stock of bees and hive sent out to him in February next, by a brother then going out, and I should like to ask the following questions if you will kindly

answer through the BEE JOURNAL.—1. Are ordinary English bees likely to answer in that country? 2. I propose to send bees and hive with spare appliances packed separate, bees to be sent in travelling box; is this correct? 3. Would it be advisable to give bees a cleansing-flight on arrival at Bombay, or Karachi, whichever port is chosen? Your answers to above I shall be thankful for, also any other advice you can give.—J. B., Salisbury December 7.

REPLY.—1. Scarcely so well as the less hardy kinds which have their habitat in hot countries. 2. Yes. 3. We advise your endeavouring to enlist the help of some appliance-dealer accustomed to packing bees under similar condition to your own. Mr. H. E. Taylor, Welwyn, might assist you in this way, as he has had experience of such work.

BEE LINES TO BEE MEN.

If you really wish to shine,
In the honey making line,
Feed up light and dose with phenol,
If she's good you'll find the queen'll
Do the rest.

If the days are cold or breezy,
And through rain the work's not easy,
And the little chaps are teazy,
If you've fed them, they'll be busy,
In the nest.

Once a fortnight you might tend them,
And a comb or two just lend them.
Too much spreading would not mend them,
Too much fussing would but send them
To their rest.

If a harvest song you'd sing,
Th'end of June your combs you'd sling,
Bees have now no time to sting,
Shallow-frames and crates now bring,
For the rest.

If of drones you've got galore,
Which are eating up your store,
Do not breed for making more,
But only from those stocks which bore,
Not the rest.

Let young queens be laying well,
Feed up light, for just a spell,
And the brood from this will tell,
Th" end of autumn feed them well,
Ere they rest.

Then put cakes of candy on,
Flakey, light, not overdone,
This they love to feed upon,
Cloth or felt you pack thereon
Felt is best.

Then the snow comes down at last,
And when winter's chilly blast
Holds your little workers fast,
Snug and warm till this is past
Let them rest.

JNO. THEO. SIBREE.

November 6.

Notices to Correspondents & Inquirers.

L. S. (Somerset).—Of samples of comb sent, No. 1 has cells in one side of comb partly filled with clover honey of fairly good quality. On reverse side, the foundation has not been touched by bees at all, for some reason. No. 2, the cells on one side of comb are partly drawn out, but have never had honey stored in them, whilst in the other side, they are partly filled with granulated honey, and that more recently gathered in liquid condition. The honey in No. 3 is very good, and comb being sealed over is ripe and in nice condition.

J. A. B. (Bridge of Allan).—Sea Holly as Bee-forage.—The flower-heads sent are from the sea-holly (Eryngium maritimum). It is often found growing in the sand near the sea shore, and bees work freely on the blossoms in some seasons.

W. G. (Croydon).—Candy Making.—Your sample of candy is quite useless as bee-food. The sugar has not been properly dissolved in the water before boiling; nor has it been boiled long enough; consequently the sugar remains in coarse granules which will be cast out by the bees untouched.

E. M. M. (N. Wales).—Above reply to W. G. applies to your case, but with regard to 6lbs. of sugar not dissolving in 1 pint of water, it will do so if the sugar is added (when water is boiling), by stirring in a little at a time, as it gradually dissolves.

*** *Some Queries and Replies, &c., are unavoidably held over till next week.*

Special Prepaid Advertisements.

Twelve words and under Sixpence: for every additional Three words or under, One Penny.

FOR Sale, LIGHT GRANULATED HONEY, in 1 lb. screw-cap jars, 8s. 6d. per dozen; also three 14 lb. tins Honey, 7d. per lb.; carriage paid.—THOMAS WELLS, 2, Claudius Road, Colchester. U 99

CHAPMAN HONEY PLANT.—Send stamped envelope and three stamps; will return full of seeds.—NEWBIGIN, Nunwick, Humshaugh-on-Tyne U 88

SPLENDID HEATHER HONEY, 7s. per stone; three stone, £1.—HARRISON, Bee Farm, Middleton, Pickering. U 87

GOOD CLOVER and HEATHER SECTIONS for sale. What offers?—DUNN, Baldersby, Yorks. U 86

PURE LIGHT HONEY, from own apiary.—28 lb. tins, 50s. per cwt. Sample, 3d.—HOPKINS, Minnis Apiary, Swingfield, Dover. U 97

WHITE AND SILVER WYANDOTTE COCKERELS from my noted laying strain, March hatched, 7s. 6d. and 10s.; April, 5s. 6d. and 7s. 6d.. Orders now taken for sittings of White, Silver, and Partridge Wyandottes; White and Silver, 5s.; Partridge, 10s. 6d. (H. Wright's prize strain). Also Simmins Conqueror Hive, with 3 section racks, and 300 sections for same; what offers?—KEIGHLEY, Kirk Hammerton, York.

FOR Sale, 12 STONE EXTRACTED HONEY, mainly sainfoin and clover, 54s. per cwt.—G. DELLER, Chrishall, Grange, Royston.

Editorial, Notices, &c.

DEATH OF DR. DZIERZON.

Early in the year we announced that this veteran bee-keeper had celebrated his ninety-fifth birthday on January 16, and that he was in very feeble health, and it is with sincere regret that we have now to announce his death.

THE REV. DR. DZIERZON.

The Rev. Dr. John Dzierzon was the oldest bee-keeper in Germany, and to him is due in a great measure the progress made in bee-keeping in Europe during the last century, and he stands out prominently as an eminent man.

The life of Dr. Dzierzon was a simple and uneventful one, and was similar to that of hundreds of clergymen in Germany. He was born on January 16, 1811, at Lowkowitz, near Kreuzburg, Upper Silesia. He attended the school of Lowkowitz till his tenth year, and was afterwards transferred to the University of Breslau, where he attained such excellence in his studies that, after having finished his course, he had been first in every class of his college, and left the University in the autumn of 1830 with a certificate as having passed No. 1.

From early childhood young Dzierzon had a great partiality for bees. His father kept a few colonies in log hives, mostly placed in an upright position; these were at that time the kind in general use in Silesia. He always found the greatest pleasure in the contemplation of the indefatigable industry of bees, and while studying at the University he was in the habit of taking his walks near to an apiary, or where a colony of bees occupied a hollow tree, so that he might enjoy the sight of the industrious insects and listen to their joyful humming.

His fondness for bees made him choose a calling in which it would be possible for him to follow the bent of his inclination.

Dzierzon was ordained on March 16,

1834, and having acted as chaplain in the Schalkowitz District of Oppeln till July, 1835, he received a clerical appointment at Karlsmarkt. This brought him a very small income, but as in succeeding years it suited him entirely, it never occurred to him to seek a more richly endowed living. The garden of his parsonage was a tolerably large one, and his first care was to arrange a place for bees. He soon stocked it with some colonies from his father's apiary in the old-fashioned hives mentioned above. His bees did very well in them. He, however, was not content with these primitive hives, but proceeded to make various changes in them, so that he might have a more perfect control over his bees. These changes gradually led up to the invention of moveable combs, which enabled him to take out a full brood-comb, or honey-comb, and insert it in another hive. He introduced bars, to which the bees built the combs, and as these were usually attached to the sides of the hive (there being no side bars) Dzierzon conceived the idea of opening the hive at the back so as to enable him to cut the attachments. At the commencement Dzierzon used single hives called "Lagers" and "Standers," but afterwards constructed hives to hold two, three, six, or eight colonies, in order to economise material and space. Owing to the advantages thus gained the number of his colonies increased in a few years to four hundred, and he was constantly making new hives and planting out-apiaries in the neighbouring villages. He had twelve of them, but his apiary at Karlsmarkt was chiefly used for observations and experiments; and after his introduction of the Italian race,* for breeding these bees and keeping them pure. This apiary was visited by numerous people desirous of increasing their knowledge in bee-keeping, especially by schoolmasters, many of whom came by desire and at the expense of the Government.† He was at all times ready to communicate the results of his experience to his visitors; he also made known his views in the *Frauendorf Journal*, which enjoyed a large circulation at that time. These articles were afterwards collected and published in the form of a pamphlet entitled "Pfarrer Dzierzon's Improved Method of Bee-keeping." This pamphlet was very incomplete, and induced Dr. Dzierzon to publish his views in a more complete form, which work, after passing through several editions, was published under the title of "Rational Bee-keeping," the latest and most complete edition of which appeared in the year 1878. In 1880 this edition was translated into English by Messrs. H. Dieck and S. Studderd, and edited by Mr. C. N. Abbott, who then introduced it to British bee-keepers. The last book he wrote, "Der Zwillingstock," was published in 1890. From 1854 to 1856 he published "The Bee Master of Silesia," but the greater part of his observations and experiences appeared in the *Bienenzeitung*. In this publication appeared his views on *Parthenogenesis*,‡ and for eight years, from 1845 to 1853, he had to fight hard to defend his theory, which met with the most strenuous opposition, and it was not until he introduced Italian bees in 1853 that he was clearly able to demonstrate the correctness of his statements. Baron von Berlepsch at first vigorously opposed it; but was at length convinced of his mistake, acknowledged his error and openly declared he would come into Dzierzon's camp "with bag and baggage." Dzierzon's theory, according to which the drones originate from unfertilised eggs, and all impregnated eggs produce females, gradually found adherents and recognition among men of science; and its correctness was proved by the microscopical and physiological researches of Professors Dr. von Siebold and Leuckart.

In recent years M. Dickel made a violent attack upon this theory, and stated that all eggs laid by the queen were fecundated, and that the bees themselves determined the sex of the eggs by means of a secretion from special glands. Dickel and Dzierzon met at the annual congress of bee-keepers in Salzburg in 1898, where they vigorously defended their theories in the presence of a large gathering of bee-keepers. Dzierzon's arguments were so forceful that they constantly elicited applause. He has had his partisans and detractors; some, like M. Pérez, have discussed the theory most courteously, a few others have done so with extreme rudeness, especially to a man of his age. It is

* Captain Baldenstein, when stationed in Italy, was the first to notice the exceeding industry of the Italian bee. When he retired from the army he settled in Switzerland, and procured a colony from Italy in September, 1843. His observations impelled Dzierzon to make an effort to procure the Italian bee; and by the aid of the Austrian Agricultural Society he succeeded in obtaining, late in February, 1853, a colony from Mira, near Venice. Dzierzon bestowed much pains in maintaining the purity of his Italian bees, and thirty years after the first introduction he exhibited at Neustadt, near Vienna, a perfectly pure descendant from his original stock.

† Several of the Governments of Europe took great interest in spreading among their people a knowledge of Dzierzon's system of bee keeping. Prussia furnished monthly a number of persons from different parts of the kingdom with the means of acquiring a knowledge of this system; while the Bavarian Government prescribed instruction in Dzierzon's theory and practice of bee culture as a part of the regular course of studies in its teachers' seminaries.

‡ *Parthenogenesis*, meaning "generation of a virgin," is the ability of a female to produce offspring without having been fertilised; bees have, with many other insects, this faculty. On page 104 of the B.B.J., Vol. XVII., the theory of parthenogenesis was treated at length in a lecture by Professor Von Siebold.

gratifying to find that Dzierzon lived long enough to see his theory triumphantly vindicated before he passed away from amongst us.

From all parts of the Continent, and from many of the reigning sovereigns, Dzierzon has received distinctions and honours. One of the first which he received was that signed by Archduke John in his capacity of President of the Agricultural Society of Graz. The honorary title of "Doctor" was conferred on him by the University of Munich. At the Bee-keepers' Congress at Darmstadt, the then reigning Grand Duke of Hesse invested him with the Order of Ludwig, and from the Emperor of Austria he received the Order of Francis Joseph. The Emperor of Russia conferred upon him the Order of St. Anne and the King of Sweden the Order of Wasa. The photograph we reproduce from the *Bienen-Vater* shows the venerable old man decorated with these Orders. He has also been made an Honorary Member of a great many societies, and his name is known in every portion of the globe.

To Dr. Dzierzon we are indebted for the various artificial substitutes for pollen. With his eye ever open to discover any means that would be of assistance to his bees, he observed them bringing from a neighbouring mill rye-meal, before they were able to procure a natural supply for the food of the larvæ; and ever since bee-keepers have been in the habit of supplying the bees with artificial pollen in the spring.

Dr. Dzierzon, like many other bee-keepers, has had sad experience of the virulence of foul brood. In 1848 this plague broke out in his apiary, destroying several hundred stocks, and leaving only ten untouched.

So vigorous was his fight against the disease that three years later, in 1851, he was able with pride to point to the four hundred colonies of healthy bees which he had worked up from the ten survivors of the disaster.

His apiary passed through several troubles. At one time seventy hives were stolen, then twenty-four were lost in a flood, and sixty were destroyed by fire.

In consequence of various ecclesiastical troubles which occurred at Karlsmarkt he decided to leave the place where he had lived forty-nine years. He removed to Lowkowitz, the place of his birth, in 1884, and took up his abode with his nephew, the youngest son of his brother, whose wife accompanied him to the last in his visits to conventions of bee-keepers. At Lowkowitz he lived a happy, peaceful, and contented life, his time being wholly taken up with his bees.

About a year ago Dzierzon was taken ill, and the worst was feared, but his vigorous constitution enabled him to rally, and during the spring he got better. Towards the autumn, however, his strength began to give way, and he sank rapidly, until the end came on October 26. To bee-keepers his loss is great, and his name will always stand out prominently in the history of bee-keeping in the nineteenth century.

Correspondence.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

*Communications relating to the literary department reports of Associations, Shows, Meetings, Echoes, Queries Books for Review, &c., must be addressed only to "*THE EDITORS of the 'British Bee Journal,' 8, *Henrietta-street, Corent Garden London, W.C." All business communications relating to advertisements, &c., must be addressed to "*THE MANAGER, 'British Bee Journal,' *Office, 8, Henrietta-Street, Corent Garden, London, W.C.'*

*** *In order to facilitate reference, Corresponderts, when speaking of any letter or query previously inserted, will oblige by mentioning the number of the letter as well as the page on which it appears.*

NOTES BY THE WAY.

[6551.] We are once again near the greatest festival of the year, the time of peace and goodwill, of re-union beneath the paternal roof, where we shall gather with heartiest greetings to those who are absent. For myself, I extend my best wishes to all our readers and brother bee-keepers for a happy Christmastide.

Cheap Feeders.—Seeing that this item is to the fore again, I offer my method of feeding as practised ever since I have kept bees in frame-hives:—Take a 2-lb. tie-over honey jar; cut an oblong-shaped piece of zinc half an inch wider than the mouth of the jar and one inch longer the other way; turn the two ends back so that the neck of the jar can pass under the turned-back ends; punch a few holes in the zinc as in the top of a pepper-castor, and you have a cheap, durable feeder. The stage may be made from any old square bit of board by cutting a two-inch hole: lay the square of wood over the feed-hole of quilt, with a small piece of glass to cover; fill the jar with syrup and invert it over the hole in wooden stage, at the same time drawing the glass out of the way. This done wrap up the feeder with any soft woollen material available, and the food will be taken down in a few hours. 1-lb. jars also answer very well, and 2 or 3-lb. jam jars for rapid feeding. With glass feeders one can see at a glance

if the food is being taken, but with tins one is apt to allow bees to escape when the feeder is lifted in order to see if empty.

Cleaning Glass Honey Jars.—I am going to give all my friends a hint which will, I think, help them very much when they receive an order for 1-lb. or ½-lb. jars of honey. No doubt you have had to enlist the help of the "good-wife" or daughter to wash and wipe these jars clean and dry. I lay special emphasis on the word "dry," because in the future all you will have to do is to wash the bottles, rinse them in clean water, and invert them in a wire sieve (the cinder sieve washed clean will do very well). Turn a couple of chairs back to back, place your wet jars in the sieve on the backs of the chairs (placed just far enough apart to hold the sieve full of bottles), then light up your little oil stove and stand it on the floor between the chairs, and in a short time your jars will be perfectly dry. A paraffin lamp will answer the same purpose, but will take longer.

Some of our friends are inclined to think that "experts" should not only teach honey production, but also find a market for the produce. Experts, alas! are only human; some may be good commercial travellers, and able to give the time for a little "drumming," as our American friends term it, but others may have secured the B.B.K.A. parchment to help them to eke out a slender income, and, except when on tour (with the route already mapped out for him and the hours fixed for his "call," wet or dry) rarely leaves his native heath; how, then, is he to know where to find a market for the honey of members, and guarantee the quality and condition of what he is selling? The honey, when delivered to the customer so found, may be anything but appetising in appearance, and not likely to bring repeat orders another year. *Experto credo.*—W. Woodley, Beedon, Newbury.

BEES FANNING AT HIVE ENTRANCES

[6552.] To tamper with the complimentary word-veil that shrouds the identity of Mr. Tickner Edwardes' correspondent—mentioned on page 494—would be an indiscretion, yet I have good grounds for stating that his opinion, together with other suggestions, was not advanced dogmatically, but as subject to promised future experiment.

The question of fanning bees is not so simple as might be supposed. Take first the not uncommon case of a full hive in summer, bearing a super covered with some light material pervious to air. There can be no doubt that the natural and healthy ventilation of the hive is by means of fresh air passing through the entrance to replace the heated air that keeps making its way upwards through the covering, to join the outer air, according to the construction of the hive. Are we to suppose that the fanning bees are fighting against this excellent arrangement, and is it not more reasonable to assume that they are assisting it?

In the case of an air-proof covering, such as American cloth, glued down all round the super, the ventilation is from our point of view indifferent, much as if we had to make the best of a very lofty hall half-filled with scaffolding and platforms, and crowded from top to bottom with human beings, and hermetical except for an opening about the height of a door along one side. The fact that in ordinary circumstances and in fairly cool weather the ⅜-in. entrance provides satisfactory hive ventilation, without any assistance from the bees, shows how differently they must be constituted from ourselves. It is not exactly so much the desire for fresh air as for a cooler atmosphere that induces "fanning." Just as in the imaginary hall every lady would be waving a fan, so when the heat reaches about 80 deg. F. the bees begin to move the air for their own comfort, as may be well observed in a large observatory hive. Here and there, without special reference, as it would seem, to position, and probably owing to individual causes, a bee will start fanning, and you may observe the wings in constant motion. It is principally, as I believe, this desultory fanning that creates the peculiar sound to be heard on a warm night. Not only is there a wish for cooler conditions, but instinct probably suggests that the superfluous moisture in the fresh-stored honey cells can best be dissipated by air in motion, just as waving a sheet of notepaper dries up the ink.

The fact that the entrance and the alighting board quite close to it, as well as (in the case of a weak colony) the floor and even the walls, are found in the morning to be wet is by no means suggestive of a strong air current. The hive entrance must, of course, provide both for entrance and exit of such air current as may exist. That the current set up by fanning at the entrance may in this case be a mild exhaust I do not question. I have made no experiment with a candle, but in the glass-covered passage of my observatory hive I have occasionally placed a feather. It has often made irregular movements away from the hive, and has sometimes been sucked out of sight towards it. This is as I should have expected. The entrance probably divides itself into two fairly equal portions, for exit and en-

trance respectively. If the air pours out in a current strong enough to extinguish a candle it must pour in with equal fierceness, and I can hardly believe that this is so because the hive would soon be chilled. Surely nothing approaching this can be possible or desirable.

Let us now consider the aspect of a worker fanning at the entrance. Her head is towards the hive and inclined downwards. The direction in which she faces is of little consequence, seeing that a bee can fly forward or backward with apparently equal facility. Her wings are in constant and regular motion, the forward or upward action to all appearance as brisk as the backward, and the sweep of the wing equal in either direction. What power she may be exerting one cannot determine, but is tempted to believe that the wings must be moving as quickly as if in flight. We know the pace of a bee. If the effect of her wings is to exert a purely backward effect, she must have to resist an enormous forward impulse in maintaining as she does her fixed position. What attitude should we expect her in those circumstances to adopt? We can realise it by thinking of a dog resisting the forward pull of a stick or rope that someone is trying to drag away from him, or of a horse that refuses to be pulled forward. The bee's attitude is very different, so much so that it was probably the sight of it that induced me, without any special reflection, to imagine as I have done, that in many instances at all events the impulse she was resisting could not be a forward one. The forelegs are not specially thrust forward, the hind legs are rather behind than in front of the body, the hinder part of which is so far raised up that a smart forward impulse would disturb the equilibrium and send the bee head over heels. Such, at least, is my recollection. I believe the action of the wings to be to some extent up and down, and that the bee merely takes a firm position on the floor. I find it very hard to believe that twenty or thirty little pairs of double wings moving thus in the open air can produce much exhaust effect within the hive, especially as in many cases the fanner is several inches from the entrance. As regards the internal fanning, I have already stated that I could never detect any joint action. The more one observes bees the less can one detect combined action in anything. "Fanning" takes place under very varied conditions, and although it may sometimes appear systematic it is in reality desultory.

To sum up, I believe that although the air in the hive must be gradually renewed, and the bees sometimes assist towards the desired result by fanning, there is much less inlet and outlet than is generally supposed, and most of what takes place is automatic. Although I am well aware that a bee can produce, in proportion to its size, a strong backward or forward air motion in its immediate neighbourhood, enough, perhaps, to extinguish a candle, I do not think that the action of the fanners always if even generally sets up an exhaust current. My mind is quite open in the matter, because I have not till recently paid any special attention to it, and have made no systematic experiments. I hope to be able to do so next season.—H. J. O. WALKER, Lieut.-Col., Budleigh Salterton, Dec. 15.

CARNARVONSHIRE BEE NOTES.

A GOOD REPORT.

[6553.] In the hope that it will interest the readers of the B.B.J. I will describe the site of the little farm where I live. Located about 600 ft. above sea level, the inward bound American liners can be seen passing Holyhead, while at the back we have a full view of the top of Snowdon. I had eight hives in the spring, and bought a swarm at the end of May. From the latter I got 76 lbs. extracted honey, and from the whole nine stocks I took 481 lbs. of surplus honey. Two of my hives sent out four swarms between them in the middle of July, so that the parent stocks only gathered just enough stores for the winter. I can also say that enough honey was left in all brood-chambers after extracting the 481 lbs. mentioned above, so no feeding was required. This gives an average of 53 lbs. for each hive. 100 lbs. is the greatest "take" I have yet had from one hive. I have three kinds of bees, English, Carniolan hybrids, and one an Italian cross. The latter are the best honey-gatherers and the worst stingers, but the Carniolans have the whitest capping, so I prefer them for comb honey and the Italians for extracted. I started keeping bees at the beginning of this century, and I have always prevented my stocks from swarming until this year. I ought to say that the two hives that swarmed yielded me 40 lbs. each before swarming. The land all round is of a heavy nature, and so I am pretty certain of a harvest every year. If the bees do not succeed well with the white clover they have good chances with the heather, for there are hundreds of acres covered with heather within reach, most of it the true "ling." I have never seen it blossom so well as this year, and never was there more suitable weather for gathering the honey. About this time I went on my holidays, and on returning home I was surprised to find that in some hives the supers had been filled and that combs

had been worked between the outer and the inner case. I prefer the "W.B.C." hive to any other, and I have only one of another kind. It was a pity that there were not a couple of hundred hives here at the time of the hot weather. I sell the honey at 1s. per 1-lb. screw-cap jar and to grocers at 10d. a lb. I manage to sell out my crop before the year ends, and I am obliged sometimes to buy more to satisfy all demands; there is not much difference in the amount of money received every year. I had 56 lbs. for an average last year, without one swarm. I do not live on bee-keeping alone, but they pay well and give me much pleasure. I had £18 profit on honey and wax. If any reader of the B.B.J. happens to come near here on any occasion, I should be very glad if he will give me a call. The bees here are perfectly healthy; in fact, I have never had myself or seen a foul brood in this county.—WM. JONES, Brithdir, Rhosgadfan, Carnarvon.

MATERIAL FOR HIVE MAKING.

THE PRESERVATION OF HIVES.

[6554.] Passing a pleasant hour this morning with the BEE JOURNAL, my attention was drawn to the query headed "Material for Hive-making" (3440, page 479), and the Editorial reply that "there is no difference between yellow pine and yellow deal, both being the same." I am quite confident that our Editors would not unintentionally mislead any of their contributors, yet (inadvertently, no doubt) their statement is not quite parallel with the facts. Unfortunately for the uninitiated, the nomenclature of timber is very loose, and quite inadequate for the many varieties of timber that are imported. Broadly speaking, however, the timbers that would be obtained, and suitable for hive-making, are divided into three classes as follows: (1) White deal (or spruce), obtained from the spruce trees of Norway, Northern Europe, and sometimes North America. This tree matures in about seventy-five years, but is useless for timber unless forest grown—the specimens in English parks being of no value as timber. The colour of the wood is white, with a slight brown tinge. The annual rings, when sawn or planed, form light brown streaks on the surface. The "sap"-wood is not easily distinguished from the "heart"-wood. The knots are distinctly black, hard, and shrink very much in seasoning, and frequently fall out. Resin is often present in blisters between the annual rings. The best white deal is shipped from Onega. That which is shipped from St. Petersburg cannot be relied upon, and that from Riga is soft and fit only for cheap packing-case work. Any white deal is quite unfit for external use.

(2) Red (or yellow) deal. This timber is cut from the Scotch fir (Alris silvestris) and its sister the northern pine. The colour varies from a reddish yellow to almost as light a colour as white deal, and the differences are due to the soil and the altitude at which the tree is grown. The term "yellow deal" is used to distinguish the lighter and less resinous from those containing more turpentine, and of stronger marked annual rings. "Red deal" lasts well when properly seasoned, and is strong, elastic, and tough, while it "works" better than white deal. Small trees carry much sap, which, when freshly cut, is hard to distinguish from heart wood. As the tree grows older the sap diminishes, and when it is seasoned turns blue, while the heart turns somewhat brown. Red deal comes from Norway and many of the Baltic ports. Dantzic sends the strongest and largest. Memel sends a timber of fine grain. Riga is smaller, but very fine and close in grain. The timber generally is straight, free from knots, and of large dimensions. St. Petersburg, Archangel, Gefle are also important ports. The American varieties of the same timber are commonly known as "red pine," and come from Canada. It has red bark, large knots, is reddish-white, clean and fine in grain, and easily worked, but in strength, and generally, is inferior to the European varieties. Red (or yellow) deal is undoubtedly the most suitable wood for hives.

(3) Yellow pine. This is the finest, softest, and most easily worked timber we have, being free from knots and resin, and agreeing well with glue. It comes from many of the Baltic ports, but chiefly from New Brunswick, and was for many years after its introduction to this country known as Weymouth pine. The trees grow to a great height, and boards 24 in. wide may be easily obtained. The rings are not distinct, and the colour, which darkens with age, is a brownish-yellow. The wood is not as strong as red deal. The knots are few, red in the better varieties, black in the common, but all liable to be loose. The American varieties are stronger, have less knots, and are distinguished by short, dark, hair-like lines parallel to the grain. The use of yellow pine should be confined to the internal parts of a hive.

I have endeavoured to keep the above description as broad and simple as possible, in order that the particulars given may be useful for your readers, who have according to my experience—a thirst for any information which is applicable to bee-keeping. My strong opinion is that

bee-keepers should—for the exposed parts of a hive—use only the best red deal. It is a little more expensive than white, but lasts very much longer, and is by far the cheaper in the end.

Now, with regard to the preservation of hives. I first came in contact with bees and bee-keeping in the apiary of an uncle in the early 'eighties, when frame-hives were less common than now, and sulphur was part of a bee-keeper's outfit. I have had hives of my own for many years, and now have a large apiary. One of the first things I did when working on my own account was to abandon the use of "commercially"-made hives. They were to me the subject of too much capital expenditure. I soon found that I had skill enough to make my own with red deal bought from the local timber merchant (not builder), and so make profitable many spare moments which before were perhaps wasted. I have twenty-six hives of my own design and manufacture, all double-walled and some zinc-roofed. Some are wood-roofed, and some roofed with "ruberoid," but all are interchangable. The next discovery was that paint was not the best preservative for hives exposed to the weather. Moisture will get into the wood, so that the paint, in time, either shells off, or only covers decay. Something that would soak into the grain of the wood, and prevent decay, I found to be better, and of the many preparations, creosote, "stop rot," "solignum," "woodsoline," "carbolinium," I chose the latter for general use. To-day I am well pleased with the result. My first practice was to build my hive and then coat with "carbolinium," but I abandoned this in favour of coating all sides of wood while in the flat with "carbolinium," then putting the wood aside to permit the solution to thoroughly soak into the wood and ends of the grain. When the solution, after a few days, has penetrated the wood, I build the hive and coat the exterior with a second application of "carbolinium." Red deal properly treated is almost as durable as seasoned oak, though, of course, not as strong. The colour of the hives when exposed to the weather, is a rich and warm brown, pleasant to the eye, particularly when contrasted with the greens of the garden. "Carbolinium" costs 4s. 6d. per gallon, and will cover about 35 yards sup. of unplaned wood, one coat. For the second coat, a gallon will spread over a few yards more.

Many of your readers are bemoaning their inability to get boards 9 in. wide. A little thought will obviate the necessity of such boards. A brood-chamber can be made of standard size with boards $8\frac{5}{8}$ in. wide, if a little attention is paid to the detail. With the exception of boards of such width for the brood-chamber, I use 7 in. boards almost entirely, because this width is less costly than the wider, yet answers as well. I enclose card and sign —LITTLE WESTERN APIARY, December 3.

HAND-PICKED DRONES.

[6555.] The season for hand-picking drones is usually in late autumn, after all but the ones we have taken good care to preserve have been driven from the hives for good. Then if we have a number of select virgin queens due to fly about this time, the chances of their meeting the drones of our choice are made almost absolutely certain.

The customary manner of hand-picking drones for colour has been to go carefully through the drone-preserving hive and lift one comb at a time in systematic order, pinching each and every drone not quite up to the standard in markings and size. This work is done early in the morning, for at such an hour very few, if any, will take wing. It is unnatural for drones to fly early in the morning. The workers, by feeling and communication, undoubtedly encourage the flight of the drones during the natural hours. The hours of flight vary with the temperature outside. Under favourable circumstances, however, all drones will be on the wing between the hours of 1 and 4 p.m. at this season of the year.

By careful study and close observation other desirable points may be as securely fixed in our bees by selection of individual drones as that of colour and markings.—E. L. PRATT, Swarthmore, Pa., Dec. 5.

CLEARING BEES FROM SUPERS.

[6556.] The articles written by our friend, "D. M. M.," are always good reading, and the advice he gives therein is, as a rule, worth following; it therefore seems almost like heresy to doubt anything he advises, but I really cannot see how his plan of clearing bees from supers (described on page 452) is a saving of bee-life. In nearly every super—during the reasonably early season—there are always a number of young bees, many of which have, perhaps, never flown (a fact especially noticeable if the day or two previous have not been warm ones). I ask: What becomes of these young bees after they have escaped through the cones? They know not where to fly to, so some may get home, some may go into neighbouring hives, some may get down to ground, never to rise again! Suppose a shower or storm comes on while they are escaping; then the odds are that the majority of them would get chilled and lost instead of

saved. If a "Porter" or other good escape is used, I do not see why a single bee need be killed or lost, however adverse the weather may be. It also appears to me that the difference in labour by following "D. M. M.'s" plan and by using a "Porter" is so small as to be not worth mentioning. Where does the interference with brood-nest come in? Does anyone interfere with that by taking any super off? Name enclosed for reference.—NON-DESCRIPT, Notts, Dec. 16.

BEES BREEDING IN DECEMBER.

[6557.] As a regular reader of B.B.J., I do not know if any others have had the same experience as myself of bees busily carrying in pollen in December.

On Tuesday, the 4th inst., the day being very mild, my bees were going into the hives loaded with pollen. It was so warm and the bees so busy that I was curious enough to venture an examination of a couple of frames in one hive, and found one of the combs nearly full of young bees, while on the others there were some youngsters that had never flown, and others had only just hatched out. I should be pleased to hear if others have had a similar experience to my own in such late breeding as December.—F. B., Tring, Herts.

[It is not uncommon to have bees gathering pollen freely, where ivy is abundant, in such abnormally mild weather as the early part of the present month. On the other hand, it is rare to have young bees hatching out in quantity as stated above, and it affords striking evidence of a strong colony, headed by a prolific queen.—EDS.]

REARING VERSUS BUYING QUEENS.

[6558.] Your correspondent, "D. V.," on page 484, refers to my note (6510, page 464) on the question of buying queens from breeders or using only home-reared mothers for their stocks. Circumstances have prevented me from replying earlier, but it may be well to say I do not wish to add anything about the price of queens, this being a matter every individual must settle for himself or herself. But I should like to repeat my opinion that it is cheaper to buy good untested queens or virgins. My notes were written with the idea of raising a discussion on the necessity of buying queens, my object being to find out a valid reason why so few bee-keepers introduce fresh blood into their apiaries. I regret my inability to give "L. S. C." (page 488) the exact figures as to my increase in honey "takes," and if I was able to do so another thing would have to be taken into account, viz., the increased experience gained; as season after season goes by one learns more and more, although we have kept bees for twenty-five years. Returning again to the notes by "D. V.," I might ask: Is it not very probable that the mothers of his best queens had mated with drones from introduced queens?—ARTS, Pembrokeshire, Dec. 16.

AMERICAN AND COLONIAL PAPERS.

EXTRACTS AND COMMENTS.

By D. M. MACDONALD, Banff.

Peddling Honey.—Two writers record their experience on this subject in the *Bee-keeper's Review* for October. Both travel round the country in specially fitted-up vehicles, intimating before-hand the probable date of call. One uses a 10-lb. pail, the contents of which are sold for one dollar and he picks up the pail next journey. His sales steadily increase, the key to his success being "fairness, good weight, and good quality." The other writer has sold 50,000-lbs. of extracted honey! He considers the whole secret of success is, "advertise properly and persistently, supply your customers promptly with the very best, and keep after them." He acts on the principle that if you cannot get the mountain to go to Mahomet, he can get the latter to go to the mountain. "Not one in fifty of my customers will sit down and *write out* an order for honey," so he wisely goes to them and readily effects a sale.

While many in this country might consider it "derogatory to their dignity" to retail their surplus in this way, very many others might take a leaf from the book of these pushing go-ahead Americans with profit to themselves and all concerned. With a little push, thousands of pounds might be readily sold for the hundreds now placed on the market. Some of those who thus dispose of their honey might be good enough to describe their experiences in the B.B.J. for the benefit of their less successful brothers.

An Old Wives' Fable?—Certain statements once uttered become stereotyped, and, from oft repetition, are very liable to get established as so-called "facts." Here, on page 861 of the American B.J. is one. "Not only some, but all honey, light or dark, that is put into sections is carried there from the brood nest," says Mr. York, and he quotes Mr. Doolittle as affirming that "when a fielder brings in a load of nectar she does not go with it into the super, but deposits it in some cell of the brood chamber, whence it is afterwards carried into the surplus apartment." If true, let us go on believing it, but if even doubtful, let us revise our ideas. First, I would say that such heavy labour of gurgi-

tating, regurgitating, charging and discharging into cells, and carrying upstairs, would be an *absurd* proceeding for any intelligent creature, and certainly so for one gifted with the brain-powers of *Apis mellifica*. Second, I see no necessity for it. It would be a case of "Love's labour lost." Third, I have never seen any evidence of it. Fourthly, and lastly, and including all the others, it is *impossible*. C'est impossible! shuts the door at once if true—which it is. With a heavy flow on, every brood-cell is cram full of eggs, larvæ, young and old, sealed and unsealed, just emerging bees, or a percentage of cells being cleared dry for "Her Majesty's" use, along with a small percentage with unsealed honey and pollen ready for the nurse-bees to manipulate. Where then are the spare cells for just gathered nectar to be even temporarily stored? No, like "Tom Bowling," it goes to the right place—"aloft!"

Utopia! Our friend "the Australasian Bee-keeper believes in calling out local talent, and monthly produces some very interesting matter on subjects pertinent to the best interests of apiculture. The subject of last competition was, "What part of the bee-keeping industry most needs development and nursing to improve the lot of bee-keepers, and how to accomplish same." The key-stone of the arch is in every case, wisely declared to be the profitable sale of the honey-crop. One declares "Unity is strength! Let us join together in one band and we will be successful." I fear the sentence should have a great big "If" somewhere. The second advises "Co-operation as a suitable panacea for all ills. If he looks across at the doubtful success of the "Honey Producer's League" of America, it may, perhaps give his scheme a pause. The third competitor is even more aspiring. He reaches Utopia—on paper. "What I would propose," he says, "is that a community get together and handle the bee products of the world, as Birmingham has taken to the hardware business, and Manchester has taken to cotton. The city would be known all over the world. Buyers would come from all parts, and English prejudice would be defeated!" A high ideal is good, but I don't think Besant's dream of an ideal People's Palace ever came to full fruition. And I have myself dreamed a hundred dreams of PERFECTION, but never reached it yet.

Warm Water for Bees.—Several bee-papers have lately been asserting that the fondness shown by bees in spring for the neighbourhood of a manure heap, was brought about by the fact that the water found there could be had at a higher temperature. Experiments should be made in the coming spring to test this. It is quite reasonable to suppose that lukewarm water should be more palatable and less destructive of the bee-life than water ice cold.

More, or Fewer Bees—Which? It is well known that the editor of *The Review* is a strenuous advocate of "Keeping More Bees," yet he takes a sensible view of the subject and allows an article to appear in his paper advocating "Keep Fewer Bees and Give them Better Care," wherein the writer says:—"I am convinced that if some men would try the experience of replacing one half of the number of colonies with a proportionate amount of *attention*, they would secure as much honey of a better quality, a better race of bees and such things as foul and black brood would not to gain such a foothold"—adding that "the *why* is plain as the way to the parish church."

Curb Drone Production.—"The man who now allows his bees to rear thousands of useless drones is but one step, a very short step, in advance of the man who keeps his bees in box-hives (or in skeps). I am sure we secure at least three tons of honey"—says E. W. Alexander—"a year more than we should if we allowed our bees to rear drones as some do. In the first place it requires far more food than it does to rear workers, and then when you consider the advantage of having nearly all the bees in a hive producers instead of a large percentage only consumers, it counts much in securing surplus." From Hyll's time on most writers advise the suppression of drones by aiding the bees in slaughtering them, but here we are shown a more excellent way. Prevention is in every way better than cure. Make raids on what brood-cells are in the brood-nest. Cut it out and replace it by worker-comb. But, better, don't allow bees to build room for useless drones.

Read! Read!! Read!!!—"The Fountain of Wisdom flows from Books," is a Greek proverb. A writer in *Gleanings* wisely advises "During the long winter evenings, get out all those back numbers of bee journals and look them over. You will be surprised to see how many good ideas you can pick up from them; especially the summer numbers that came when you were so hurried." The advice is excellent, but read up your text-books as well and every other bee book you can lay your hand on digest your reading, and plan and scheme for better results next year. A copy of any or all of the books mentioned on page iii. of this week's B.B.J. would make an excellent and appropriate Christmas or New Year present to any bee-keeping friend, or any one meditating a start in the pursuit. These, perhaps my last words for the fast passing year, are the wisest I have written during 1906.

Queries and Replies.

[3449.] *A Beginner's Queries.*—May I ask for a line of reply to the following queries? 1. Have bees any antipathy to stable manure, or is it injurious or annoying to them to have it deposited within six yards of the hives? 2. Is there any objection to the bottom wooden part of a feeder being left over the frames of the broodchamber during the winter months? 3. Would it not act as a passage-way for the bees, and would they not cluster in it if the wrapping over it is sufficiently warm? Excuse my ignorance; this is my first season as a bee-man.—J. L., Penge, S.E.

REPLY.—1. The bees would not be troubled, but it is objectionable to have a manure heap so close. 2. None whatever. 3. If the vacant circular space was filled with soft candy, the bees would cluster there till the food was consumed.

[3450.] *Ventilating Floorboards.*—Being a regular reader of your valuable journal, may I ask you if you consider it advantageous to have floorboards made to lower in front by being hinged at the back for giving extra ventilation in summer? It might also be used for giving more air space under combs in winter instead of anything else if a block with entrance was provided to fill up the space in front. My object in writing is to ask if the above suggestions are of any value to bee-keepers, or only amount to a useless fad? I enclose name and address for reference.—AMATEUR HIVE MAKER, Worcestershire, December 12.

REPLY.—Your idea of a ventilating floorboard is very good, and has many advantages, but it is by no means new, in fact we ourselves had hives made on the same principle in use nearly thirty years ago, with fixed legs and movable floorboards, working on inclined runners, and capable of being raised or lowered in front by means of a loose wedge. A hive of somewhat similar construction is described in Vol. II. of the B.B.J. for March, 1875. The fault of the plan, however, was the risk of crushing bees between the floorboard and the lower edges of the body-box; and since the introduction of hives without fixed legs, the ventilating floorboard has dropped out of use.

[3451.] *The "Raynor" Feeder.*—Will you kindly tell me:—1. Who sells the "Raynor" Feeder, like that illustrated in the "Guide Book"? 2. What is a good material to use for the first quilt above the frames? I find that the bees gnaw holes through the quilts I have used. I send name, and sign—HONEY-BEE, Yorkshire.

REPLY. As several of our leading advertisers stock the genuine "Raynor" Feeder, we need not specify whom you should apply to for it, so long as mention is made of the "Guide Book" illustration. 2. Bed-ticking is a good material for the first quilt next the frame-tops. Some use common jute stair-carpeting, which is very durable. An important point, however, is to have a couple of thicknesses of warm material over the first quilt, such as the grey felt used for wrapping steam pipes.

Notices to Correspondents & Inquirers.

J. T. T. (Epworth).—Non-Standard Hives.—The trouble you justly complain of frequently occurs with beginners who cannot, of course, realise the difference between a stock of bees in a hive fitted with frames of any shape or size but the B.B.K. standard. You have done very well to get 30 lbs. of honey from the odd-sized frame-hive this year, but the sooner you get the bees out of it the better, and a copy of the "Guide Book" will direct you how to proceed in doing this. The trouble with No. 2 hive fitted with standard frames is entirely due to the person who either stupidly or innocently allowed the bees free access to the roof and enabled the bees to fill it with honey in comb, after filling the frames below. Since you have succeeded in clearing the roof and settling the bees comfortably in the body-box for winter, your best course is to study the "Guide Book" and make the hives proposed from the information it contains. As a practical joiner, you will have no difficulty in doing this before next season's bee-work begins.

A. B. (Winchmore Hill).—Books on Bee-Keeping).—The work referred to is—as its title implies—intended for persons who propose to take up bee-keeping on modern lines as a business, and are prepared to invest something like £500 in the venture. It is not written for those who will never keep more than a dozen or so of hives in their own gardens. Nor do we think it quite adapted for lady bee-keepers.

E. M. (St. Asaph).—Candy Making.—If the sugar is stirred in while water is hot, a portion at a time, you will not have difficulty in getting the 6 lbs. to dissolve in a pint of water. The mixture should also be stirred constantly while cooling off in cold water until it turns white and begins to stiffen like thick paste. It is then fit for pouring into the moulds.

W. S. (Staffs.).—Quality of Honey.—We are glad to learn from your customer that the matter in dispute has been amicably settled in your favour.

*** *Some Queries and Replies, &c., are unavoidably held over till next week.*

Special Prepaid Advertisements.

Twelve words and under Sixpence: for every additional Three words or under, One Penny.

FINE LIGHT SECTION HONEY, in glazed cases, 6s. per dozen, to clear.—TREDERWEN, 3, Weighton Road, Anerley. v 9

BUFF ORPINGTON COCKERELS, for crossing, good laying strain, 5s. each.—NICHOLSON, Langwathby. v 11

WANTED, SECTIONS and RUN HONEY; must be light in colour; carriage paid to Chesham Station.—CARTER, Chartridge Green Farm, Chesham, Bucks. v 10

Editorial, Notices, &c.

SEASONABLE.

In addition to this being our final issue for the year, when space is much curtailed by the fact of its being "Index Number," we are making an effort to get the present issue in the hands of readers before Christmas Day. We also gladly avail ourselves of the opportunity for repeating the time-honoured wish that it may be a very happy one for all readers, young and old. THE EDITORS.

A NOTABLE BEE CASE.

BEE-KEEPERS AT VARIANCE.

(From our own Correspondent.)

An action of much importance to bee-keepers was tried at the Birmingham Assizes on December 12 and 13, before Mr. Justice Phillimore and a jury. The case is the outcome of a quarrel between two next-door neighbours living at Tile Hill, Coventry. Mr. A. E. Parkes, the plaintiff, and the defendant, Mr. T. Reynolds, are both bee-keepers, and members of the Warwickshire B.K.A., and each has his own little apiary; the eight hives belonging to the plaintiff being located on a plot of land hired from the defendant, 200 yards distant, while the bees of Mr. Reynolds were in his own garden attached to the house. The issue was further complicated by disputes between the parties on other matters connected with Mr. Parkes's tenancy, the landlord of the house being a brother-in-law of the defendant. The leading counsel in the case were Mr. Hugo Young, K.C., for the plaintiff, and Mr. H. Maddocks, for the defendant.

In opening his case, Mr. Hugo Young stated that when Mr. Parkes took the house he was not aware of the position of the defendant's hives—ten in number—his tenancy commencing in March, when the bees were not active. Later on, however, these bees (estimated, according to counsel, at about 500,000) were said to be a nuisance, because, scenting jam and sweets, they entered the plaintiff's house in great numbers, crawling over the floor, and up the legs of the inmates, whom they repeatedly stung, and in fact, threatened to drive out his family and friends from the place. The plaintiff's wife and children, also his gardener, were stated to have been stung outside in the garden. A lengthy correspondence was read by counsel, showing other grievances against the defendant apart from the bees. It appeared that Mr. Reynolds had offered to move the bees if Mr. Parkes would defray the cost of removal, but this offer was not accepted. It was also alleged that Mrs. Parkes, who was in delicate health, had been compelled to leave home for six weeks in consequence of the trouble with the bees. Damages and an injunction were claimed.

Mr. Parkes, who is a jeweller in Birmingham, gave evidence in corroboration of the opening statement of his counsel. The house was taken on a five years' lease—dated March, 1905—from defendant's brother-in-law; but, soon after entering into possession, disputes arose on various matters, apart from the bees. Later on, his wife and children were stung in his garden at various times, and in the end, when such food as jam was on, the bees entered the rooms in such large numbers, that he had to close his house from July 29 to the end of September last year. So great was the trouble that he had endeavoured to terminate his occupancy, but his landlord refused, and held him liable for rent till the termination of his lease.

In cross-examination by Mr. Maddocks, the plaintiff admitted that there might be some 600,000 of his own bees located 200 yards away, and that it was the habit of bees to forage at some distance from their own hives. He further stated that anything over 30 to 40 yards was a proper distance to keep hives from a dwelling house, and when he entered on his tenancy in March, he knew that Mr. Reynolds kept bees, but he had made no enquiries about them. He had not complained of the bees until August, 1905, that month being the one when bees were most active in searching for sweets, and also he bore in mind that Mr. Reynolds and himself were members of the same bee-keepers' Association. Their earlier disputes were over other matters connected with the leasing of land, etc. The first letter about the bees was dated August 11. When his family were stung he did not notify the fact to defendant: he had proposed raising the fence between the two gardens, but after consultation with his wife, had changed his mind on that point. He gave no instructions to the expert, Mr. Franklin, to move any of his hives into his own garden. The judge here interjected the remark: "Bees don't go to people to sting them; they go where there is some attraction." Continuing, plaintiff said the journey of his wife and family to Scarborough was not their annual holiday. He admitted having killed sixteen of defendant's bees, adding, bees sometimes interfere with people even if not attacked.

In re-examination, the plaintiff stated that he could not say in what direction bees might go on leaving their hive. A

suggestion, made by the plaintiff, that the defendant had tampered with the water-supply pipe from the well, was adversely commented on by the judge. Plaintiff also said he had received no complaints from defendant about his (plaintiff's) chickens.

The first witness in support of the plaintiff's case was the Rev. E. Davenport, first-class expert of the B.B.K.A., and lecturer for the Worcestershire County Council. He had inspected the hives in question, and considered they were dangerously near the house. A more suitable position would be on the plot of land on the other side of the railway, 200 yards distant. In reply to his lordship, the witness said he did not think a railway company could maintain an action for nuisance because bees entered first-class carriages; the injury would be to the bees. Bees were attracted by sweets, and one bee would bring others. They would scent sweets at a distance of half a mile. In his opinion, the hives were placed too closely together. Bees became excited during manipulation. The present was a good time to move bees. He considered there was no more dangerous site in the defendant's garden than that which the hives at present occupied.

In cross-examination, witness said that bees were most active during the months April to August. If bees have a clear space in front of their hives they will fly straight away from the alighting-board in front of the entrance. When laden with honey, bees would come straight home. There are usually from 40,000 to 50,000 bees in a hive. A swarm would weigh 6 to 7lbs. Bees, after passing a high fence, would take a long flight without coming down again. Bees do not enter houses without some attraction, nor have they a habit of attacking persons. They would, however, defend themselves, and if they had crawled up one's trousers they might sting the leg. Even if there were flowers in an adjoining garden, the bees might fly away in another direction for food.

Mrs. E. Parkes, wife of the plaintiff, said they took possession of the premises in March, 1905. That summer the bees came into the house and stung herself, her children, and the gardener; eighteen bees were caught on one day and killed. This year the bees had not been so troublesome, as precautions had been taken. No sweet cooking had been done in the house except with doors and windows closed. There were not many wasps about. The witness and her children had to go away to Scarborough in July because she was afraid of the bees. Her health had not been good for the last two years. Being stung was very painful and upset her nerves; she had a great dread of being stung. Her health was fairly good when she went to the house. She took a note of the number of bees killed by her husband on one occasion and produced that note; the number was eighteen. She had never told Mrs. Reynolds that she or her children had been stung, nor had she written about it. On the occasion when the bees were killed, honey and pineapple were on the table.

Dr. R. Nurton, the medical attendant on the last witness, said that Mrs. Reynolds was of a neurotic temperament, and had a great fear of the stings of the bees, which caused inflammation. One Sunday he noticed several bees in the bedroom and breakfast room. He could see the hives from the bedroom window, but not from the breakfast-room. Mrs. Reynolds was more liable to fear than an ordinary person. Mr. Flint, a surveyor, produced a model and plan of the houses and gardens, and stated that the distance from the nearest hive to the window of the breakfast-room was about 15 feet. One afternoon last summer he was at Tile Hill, and saw several bees in the house. Eight of them were killed in his presence.

(*Continued next week.*)

BRITISH BEE-KEEPERS' ASSOCIATION

The monthly meeting of the Council was held on Thursday, December 20, at 105, Jermyn Street, S.W., Mr. T. I. Weston occupying the chair. There were also present, Dr. T. S. Elliot, Messrs. T. Bevan, W. Broughton Carr, W. F. Reid, E. D. Till, and the Secretary. Apologies for inability to attend were read from Mr. T. W. Cowan, Col. H. J. O. Walker, Messrs. J. P. Phillips, Geo. Hayes, W. Richards, A. G. Pugh, W. H. Harris, and F. B. White. The minutes of the previous meeting were read and confirmed.

Mr. John Ross Trent, "Ercildourie," Lyveden Road, Tooting Graveney, S.W., was elected a member of the Association.

A request from the newly-formed Crayford and District Bee-keepers' Association to become affiliated was acceded to. Arising out of this affiliation Mr. Till (whose return to the Council after a somewhat protracted absence due to illness and other causes, was warmly received by his colleagues) expressed the hope that means would soon be found of reviving the Kent Association. A conversation took place on this subject, and it was hoped to induce some gentlemen resident in the county to actively interest themselves in the subject.

The Finance Committee's report was presented by Mr. T. I. Weston and duly adopted. A report upon the recent examination for second class certificates was

presented, and on the examiner's recommendation it was resolved to award certificates to Miss Grace E. Shaw, Wallington, Surrey; Mr. L. A. Vidler, Rye, Sussex; Rev. H. Ellison, Ashford, Kent; Mr. R. M. Brown, Luton, Beds; Mr. W. H. Stoppard, Mapperley, Notts; Miss A. M. Sopper, Bredons Norton, Tewkesbury; Miss G. Price, Miss Dombrain, and Miss W. Allen, of the Lady Warwick College, Studley: Miss Ida Brown, Miss Eva Sinckler, and Miss E. Tudor, of the Horticultural College, Swanley.

Correspondence was read with the Lincolnshire Bee-keepers' Association, at whose instigation it was agreed to add to the Honey Department of the Royal Agricultural Show, to be held at Lincoln next summer, special local classes, viz., for 12 1-lb. sections, and 12 1-lb. jars extracted honey, with prize-money 20s., 15s., 10s., and 5s. in each class, the competition to be confined to Lincolnshire and members of the Lincolnshire Bee-keepers' Association only. Entry fee, 1s. 6d. in each class. Silver and bronze medals will also be given as per rule of the Lincolnshire Bee-keepers' Association.

A request was received from the Royal Ulster Agricultural Society for special prizes in the classes for Honey at the Society's Spring Show. The Council regretted that they had no funds which could be applied to this particular purpose.

Correspondence on a variety of other matters was received and dealt with, and at the request of the Board of Agriculture arrangements were confirmed for giving expert advice relative to some diseased bees which had been sent to them.

The next meeting of the Council will be held on January 17, 1907.

Correspondence.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

**** In order to facilitate reference, Correspondents, when speaking of any letter or query previously inserted, will oblige by mentioning the number of the letter as well as the page on which it appears.*

AMONG THE BEES.

SUPPRESSING HEATHER HONEY EXHIBITS.

[6559.] I asked for "light" on this subject, and instead, as yet, we have got but darkness, generated in a cloud of words, displaying an intolerance of criticism which in the past has cost apiculture dearly. I thought at first of replying to Mr. Weston (6508, page 463) with a *tu quoque*, but this rarely advances any argument, so I will be content with simply but emphatically saying that I made no "railing accusation," accused no one of "all manner of wickedness," and evinced no signs of "waspishness." When readers can conscientiously accuse me of indulging in such a degrading vice as this last implies I will think it high time to cease contributing to the B.B.J. But let your readers act as judges.

My contribution on page 452 did but tell a plain unvarnished tale, supplying some facts, from which I made a natural deduction, as unquestionable as a postulate of Euclid. My main fact was that prizes are systematically withheld from heather honey exhibits, a truth which no euphemism will over-ride; and my deduction is that such treatment must necessarily militate against the success of these displays. If with twelve entries of heather honey in sections (Mr. Weston's "well-filled" class!) we find they are, as I said, "cold shouldered" with only three prizes, while the new pet class of "heather blend" honey receives four prizes, and granulated honey the same number, each for seven entries. In view of this need it be wondered that invidious distinctions are drawn, and that some look on it as an injustice?

Yet Mr. Weston is content to describe such treatment as *justice*, and considers this money, fairly won by somebody but withheld, has been applied to a "better purpose." Alas, poor Yorick! With such words fresh in their memory, and this doubter contemptuously questioning if there is "any sich stuff," heather-men are likely to stand still further aloof. That is, however, by no means my desire, so I am glad to perceive there is still common ground between us. Mr. Weston and I agree that good prizes are "offered," that too few entries are made, and that for successful results an effort all round should be made to put matters on a more healthy footing, which was exactly my design in dealing with the subject. We seem to disagree only in the one essential point, which with me is an article of belief as undeniable as any or all of the great thirty-nine. Give the prizes offered, I say, because, if not, you carry on a process of strangulation, inevitably ending in the death of the victim. Even in the case of the three shows named, proof of this may be seen. In my last I described the Grocers' as "consistent," as they almost invariably give the four prizes offered. They reap of what they have sown, and got twelve entries of comb-honey this year, against five at the "Confectioners'" and

none at the Dairy (see Report, page 413). Last year they stood 15, 3, 0, Let the two policies and the two results speak for themselves. As proof of effect following cause, they are more eloquent than any words of mine.

[Believing, as we do, that the exhibitions referred to above are of the utmost value to the bee-industry of the country, as bringing together producers, traders, and consumers, we have all along been hopeful for their ultimate success. We have also, along with Mr. Weston, been keenly disappointed at the failure of the classes for heather honey, and, with this in view, will in an early issue endeavour to let in a little of the "light" our esteemed contributor "D.M.M." asks for.—EDS.]

"*Suppressing*" *Foul Brood.* — When, a year or two ago, on ordering from Mr. Simmins his new edition of a "Modern Bee Farm," I, while complimenting him on his book, wholly dissented from the part dealing with foul brood, stating, if memory serves me correctly, that his superstructure was built on an unstable foundation, and that when tested I feared it would topple over like a house of cards. My prognostication has been fulfilled to the letter. Several very intelligent bee-keepers in this and neighbouring counties were enthusiastic in its favour, but, alas! they have now changed their minds, and reverted to the "ordeal by fire." Like Mr. Crawshaw (page 418), they have made a recantation. So it is with many others who have confided their results to me. Therefore, my "I know" was built on a securer basis than my own limited knowledge. When I find good men and true all agree that the panacea fails at the critical point, and further, when I have never met one single bee-keeper who has fully succeeded, I am justified, I think, in warning brethren from pursuing a will-o'-the-wisp. I am perfectly aware that quite a number of germicides now on the market will kill germs. Taken in time, I believe they will check, or even temporarily suppress, the inception of foul brood at certain seasons to such an extent as to lead the unwary to assume that a cure has been produced; but, by and by there is a recrudescence of the disease. That is my decided opinion, and I would much prefer to trust to Schirach's cure of over one hundred years ago (which is really the misnamed "McEvoy" modern system) in preference to Mr. Simmins' treatment. The one goes to the root of the matter, the other simply temporarily suppresses the scourge, in a marvellous manner at times, I grant, but still so as to leave the seeds of evil behind, by and by to spring up and bear again of their evil fruit. I am always open to conviction, and when Mr. Simmins or one of his disciples submits reliable proof of a cure I will be the first to urge the fact on the bee world if I can believe in its efficacy—but not till then. At present I am in the position of the man who asks: Can I believe in a miracle?

Pronunciation of Bee Words.—When Col. Walker some time ago wrote on this subject there followed a considerable amount of correcting and re-correcting, tending to confusion. Recently the list of words on page 451 has also resulted in amendments and re-amendments, causing some doubts and difficulties to the "man in the street." Could not a full and absolutely perfect list be reprinted on the first page of the new volume for 1907, to which all could turn for reliable guidance? I am a shy individual, and after being informed (as it is information to me) in "Cappings," on page 478, how heathenish our pronunciation in Banff is, I would have still more hesitation in obtruding an oar. A wise old "saw" comes up unsought to my remembrance: Boys living in glass houses should not throw stones!—D. M. M., Banff.

COVERS FOR HIVE ROOFS.

[6560.] I have received some inquiries by post since my apiary was shown in your issue of December 13 as to the best way of covering hive roofs with zinc, and it may save time if you allowed me to give particulars in print. In the first place, then, the material I now use is not zinc, but galvanised sheet iron (26 gauge), which can be got at any large ironmonger's at a rather less price than zinc costs. Galvanised iron will not rust or warp as zinc sometimes does under a hot sun. It is also stronger than zinc, but quite easy to cut up, after a little practice, with a pair of tinsmith's shears. In my hands it is no more trouble than cutting paper. Several of the first hive roofs I made caused me a good deal of trouble in covering, as the roof-boards overlapped, and in consequence the iron had to be put on in strips the width of the board, and the joints soldered. But I have overcome the difficulty now by making the roofs with only a slight pitch and nailing the boards flat on, not overlapping, then cutting the iron (or zinc, whichever you prefer) half an inch larger than the roof all round. I then bend the spare half-inch down and tack to the edges of the boards. On no account should any nails be used for the top of roof, or the water will be sure to find its way in. If the roof-boards are $\frac{3}{8}$ in. thick, the edges of the iron, or zinc, will tuck in nicely, and not be liable to cut one's hands when lifting the roofs off. Perhaps some would prefer to have boards for roofs slightly stronger than $\frac{3}{8}$ in., but

I am only explaining to you how mine are made (most of them are made from Gossage's soap boxes), and when covered with iron or zinc they are quite strong and heavy enough for handy manipulating. The only remaining thing needed is to give the roofs so made a coat of white paint, to keep them from drawing the hot sun, and you may rest easy as to storms of rain, wind, or snow, as I never have any trouble on that score now.—F. W. GELDER, Lincoln, December 18.

SHOWS AND SHOWING.

EXHIBITORS AND THEIR COMPLAINTS.

[6561.] As steward of the show mentioned by your correspondent "F. G." (6550, page 497), I would like to say that although both his exhibits were packed in one box, they were firmly and securely packed, and nothing but ill-usage in transit could have brought about the disaster which he attributes to me. I may say that his exhibits arrived at the show with one section broken, but the judge did not penalise his exhibit, as he said the fault was not the exhibitor's. I think your correspondent, instead of making a grave complaint in print like this (which tends to do us great harm), should have claimed from the railway company. I have now packed honey for three years, and this is the first time we have had a complaint. As to the loss of the box, I may say that, although labels to address to and from the show were sent to every exhibitor, not one-half of them either filled up the reverse side with their name and address on, or put their show number on their exhibits. If your correspondent is a habitual exhibitor, as I should take him to be, when he writes about the £. s. d. of the question, why does he not have a proper exhibition honey-box, instead of an ordinary soap or canned meat box with straw in it? Apologising for taking up so much space—GEO. B. FLETCHER, "Ladyhough," Chorley, December 18.

[6562.] Replying to "F. G." (6550, page 497), I may say that I was present when the exhibits were packed up by the steward, and can assure him that every care was exercised. As to the other box going astray, it is not to be wondered at if his was one of the boxes (among many) that came without the number of exhibit. I may say that the work of the steward and his assistant—both at the opening and the close of the show—was greatly increased owing to so many exhibitors having failed to number their exhibits. From long personal experience I may say that I have never seen a better packer than the steward at our show.—FREDERICK H. TAYLOR, 1st Class Expert, B.B.K.A.

CLEANING UP WET STORE-COMBS.

[6563.] I have read all the notes on the subject of cleaning up wet combs after extracting for years in both your papers. It has again been dealt with pretty freely of late, but I really did not think that bee-keepers found any difficulty over the matter, or I should have given you my own plan before now, as I got over this trouble the first year I had a hive of my own. My method is as follows:—I first turn back the corner of the quilt—or leave the feed-hole open (the corner plan is best)—I then put the frame of comb on the top of the quilt, *bottom bar uppermost*. By placing the comb so, the bees are placed at a great disadvantage, because the cells are slanting down instead of up, and therefore they cannot store honey in them without first making structural alterations, a work which bees are not inclined to take in hand in the late autumn. I have never known this plan to fail in securing the desired object. The manner in which I discovered this fact was by laying some broken comb containing honey flat down alongside some combed sections; the result was that the sections were partly filled with the honey from the broken pieces of comb, while the latter were not only cleaned up, but torn to pieces! I then, with the object of getting partly filled combs cleaned up, experimented, and found that if wet combs are turned upside down, as stated above, the bees will clean them out, and yet not gnaw them away, unless they are hard pressed for room. Shallow-frames with either broad shoulders or "W.B.C." ends can easily be balanced bottom upwards for the purpose of being cleaned up. I should like to know if this plan is new, as I have never heard of it from anyone else. I now beg to ask a query myself: What is the easiest way to lock the several parts of a "W.B.C." hive together without using a lock on each lift? I close by wishing a Merry Christmas and a Prosperous New Year to our Editors and all readers of both the B.B.J. and the *Record*.—H. POTTER, New Brompton, December 19.

[The most suitable contrivance we can think of for securing the end in view is a rod of bar-iron, with screw-thread top, at each side of the hive, similar to that in the heather-going hive, made by W. P. Meadows, Syston.—EDS.]

PRESS CUTTINGS.

APIARIAN MOURNERS.

Several swarms of bees followed the hearse of Mr. Oliver J. Seer, a pioneer apiarist, of Wall Lake, Iowa, and, deserting their hives, swarmed on the trees over his grave in the cemetery. During his life he moved freely among them without covering his hands or face, and he was never stung.—*Daily Express*, November 29.

We have received many amusing press-cuttings from Transatlantic sources on bees and honey, but the above will be hard to beat.

Queries and Replies.

[3452.] *Bees and Winter Stores.*—Being only a one-year-old beekeeper, I am anxious to satisfy myself as to the condition of my two hives. No. 1 is a swarm which I got early in July, but unfortunately in the hiving the queen got killed. To remedy my loss, I got a complete frame of brood out of a hive of fine Italians with two queen-cells on it, and after getting three frames with "starters" along with the frame of brood, the bees immediately commenced work. One of the queens hatched out all right, and when this hive is now on nine frames, all well worked out and covered with bees, I take it that this queen has not done badly at all. I do not know the age of the queen in No. 2 hive, as being overcome with a desire at the beginning of the season to commence bee-keeping, I bought the first stock that came my way, and made no inquiries about it, further than learning that it was a swarm of the previous year. On the first visit of our county expert, early in June, I was, so to speak, thunderstruck to learn that this stock was rotten with foul brood. The bees were immediately driven into a straw skep, and after having gone through the starving process, they were then hived on four frames with "starters" in a new hive, and fed nearly all through the summer on medicated syrup. No trace of the disease appeared all through the season, and this stock is now on seven frames, all well covered with bees, too. On examining both hives early in September (I need hardly say neither of the hives was super'd) I found that there was about 15 lbs. of honey in each. I commenced feeding both hives on September 19, giving medicated syrup as directed in "Guide Book," using the same pattern feeder for each. No. 1 stopped taking the syrup on October 11, having taken nearly nine pints of syrup, while No. 2 ceased taking syrup on the 2nd, having consumed nearly seven pints. Both stocks were then packed for the winter. I may say that in the last week of November both hives were busy, the bees carrying in pollen freely. I therefore now ask:—1. Are both hives well enough provided with stores for the winter, and about when should I examine them again in the spring to see if any candy is needed? 2. Would it be better for me to get a young queen for No. 2 hive next season, as the present queen has certainly ended her second season, and probably may be three or even more years old? Name enclosed for reference.—IRISH READER, Strabane, December 15.

REPLY.—1. The quantity you mention as having been stored on October 11 should suffice to carry each stock through the winter, or say, till the end of February, when an examination should be made, and if stores are running out a cake of fresh made soft candy will put the bees on the safe side and also serve to stimulate breeding. 2. If you can be absolutely certain that the bees of No. 2 hive have not re-queened themselves, it will be very advantageous to give them a young and prolific queen in the early spring.

Some Letters and Queries are unavoidably held over, owing to space occupied by the Index.

Notices to Correspondents & Inquirers.

Letters or queries asking for addresses of manufacturers or correspondents, or where appliances can be purchased, or replies giving such information, can only be inserted as advertisements. The space devoted to letters, queries, and replies is meant for the general good of bee-keepers, and not for advertisements. We wish our correspondents to bear in mind that, as it is necessary for us to go to press in advance of the date of issue, queries cannot always be replied to in the issue immediately following the receipt of their communications.

J. M. B. (Knowle).—Pamphlets for Lecturers.—The pamphlet on "Honey as Food" is out of print, and we are unable to say if it is intended to republish it.

J. P. (Polpero).—Popularising the Use of Honey.—Temperance drinks in which honey is an ingredient have been more than once made and put on the market, but with indifferent success, consequently they have dropped out of use. Nor do we know of anyone who manufactures mead in quantity, though that is not a non-alcoholic beverage.

V. L. R. (Ellon, N.B.).—Earlier Editions of "Guide Book."—We have no copies of earlier editions in stock to offer at reduced rates, or, indeed, at all, but would willingly send you a few copies of the latest edition at trade price (25 per cent. off) for the use of "beginners," in whom you are interested.

J. ANDERSON (Wishaw).—Queen Cast Out in Winter.—The stock had better remain as it is till early spring, when the bees can be united to the nearest colony to where the hive now stands. Sorry for delay in reply.

G. R. S. (Derby).—Making Bee Candy.—Your sample will do very well for present use; it is not quite boiled long enough, and when the present moisture evaporates, it will, we fear, become hard and unfit for bee food in winter.

⁂ Mr. Geo. Rose, Gt. Charlotte Street, Liverpool, writes: "Referring to the inquiry of "T. E. C." (Redruth) in B.J. of December 6 (page 470), I will be glad to supply your correspondent with heather plants at 30s. per 1,000."